

"layer of type". In view thereof applicants respectfully request the examiner to withdraw the rejection of claims 112, 113, 117, 118, 122, and 123 under 35 USC 112 as indefinite for using the terminology "layer-type".

In Attachment B there is a search done by Jim Leonard, an IBM Research librarian, at the request of the undersigned attorney of the term "Layered like" and "layered type" in on-line non-patent literature prior to applicants' filing date. From Attachment B it is clear that these terms are used and understood by persons of skill in the art.

In Attachment C there is a search done by Jim Leonard, an IBM Research librarian, at the request of the undersigned attorney of the term "rare earth like" in on-line non-patent literature prior to applicants' filing date. From Attachment C it is clear that this term is used and understood by persons of skill in the art. This is in addition to previously submitted evidence of the definiteness of this term to overcome the rejection of applicants claims as indefinite for using the term "rare earth like" which applicants respectfully request the examiner to withdraw.

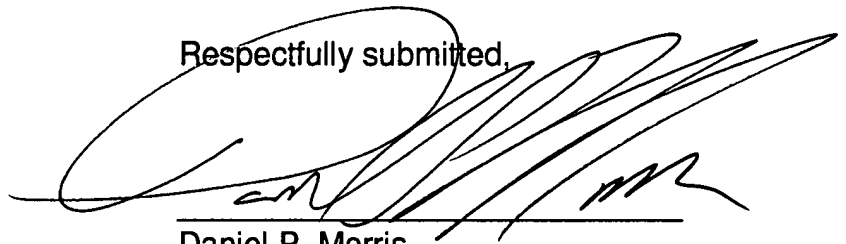
In Attachment D there is a search done by Jim Leonard, an IBM Research librarian, at the request of the undersigned attorney of the term "perovskite like" in on-line non-patent literature prior to applicants' filing date. From Attachment D it is clear that this term is used and understood by persons of skill in the art. This is in addition to previously submitted evidence of the definiteness of this term to overcome the rejection

of applicants claims as indefinite for using the term "perovskite like" which applicants respectfully request the examiner to withdraw.

Please charge any fee necessary to enter this paper to deposit account 09-0468.

If the above-identified Examiner's Action is a final Action, and if the above-identified application will be abandoned without further action by applicants, applicants file a Notice of Appeal to the Board of Appeals and Interferences appealing the final rejection of the claims in the above-identified Examiner's Action. Please charge deposit account 09-0468 any fee necessary to enter such Notice of Appeal.

Respectfully submitted,

A handwritten signature in black ink, appearing to be "D. Morris", written over a horizontal line.

Daniel P. Morris
Reg. No. 32,053

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ATTACHMENT A

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YOUR SEARCH REQUEST IS:
CLAIMS(LAYER-TYPE OR (LAYER PRE/1 TYPE))
AND SUPERCOND!

YOUR FOCUS SEARCH REQUEST AT THE TIME THIS MAIL-IT WAS REQUESTED:
LAYER PRE/1 TYPE

NUMBER OF PATENTS FOUND WITH YOUR FOCUS REQUEST:

5

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*****02630*****

PAGE 1

FOCUS - 1 OF 5 PATENTS

Jul. 2, 1991

Array for a nuclear radiation and particle detector

INVENTOR: Da Silva, Angela J., Vancouver, Canada
 Le Gros, Mark A., Vancouver, Canada
 Turrell, Brian G., Vancouver, Canada
 Kotlicki, Andrzej, Warsaw, Maryland, Poland
 Drukier, Andrzej K., Greenbelt, Maryland

SUM:

... K) and a melting point of less than 1000o C., and more preferably less than 500o C.

The present invention also relates to a method of making an array comprising depositing a substantially continuous film layer of type I superconducting material on a substrate, removing a portion of said film to leave a plurality of discrete pixels each of a predetermined size of said type I superconducting material arranged ...

... [*13] detector as defined in claim 8 wherein said each array is a planar array.

[*14] 14. A method of making a detector array comprising depositing a substantially continuous film layer of type I superconducting material on a substrate removing a portion of said film to leave a plurality of discrete pixels each of a predetermined size of said type I superconducting material arranged ...

PAGE 2

FOCUS - 2 OF 5 PATENTS

3,930,903

Jan. 6, 1976

Stabilized superconductive wires

INVENTOR: Randall, Robert N., Wayland, Massachusetts
 Wong, James, Wayland, Massachusetts

What is claimed is:

[*1] 1. Superconductive multi-filament wire product comprising,

means defining a copper matrix with a plurality of spaced filaments therein,

each of the filaments comprising a layer therein of type II superconducting intermetallic compound of Beta-Wolfram structure, being the diffusion reaction product of source filaments comprising a cross-section multilayer configuration of a refractory metal layer each containing ...

PAGE 3

FOCUS - 3 OF 5 PATENTS

3,910,802

<=2> GET 1st DRAWING SHEET OF 1

Oct. 7, 1975

Stabilized superconductors

INVENTOR: Wong, James, Wayland, Massachusetts

What is claimed is:

[*1] 1. Superconductive multi-filament wire product comprising,

means defining a bronze matrix with a plurality of spaced filaments therein,

each of the filaments comprising a layer of type II superconducting intermetallic compound of Beta-Wolfram structure being the diffusion reaction product of a first elemental component derived from said bronze matrix and of a second elemental component derived from source ...

PAGE 4

FOCUS - 4 OF 5 PATENTS

3,720,847

<=2> GET 1st DRAWING SHEET OF 3

Mar. 13, 1973

POWER CURRENT CRYOTRON WITH FLAT GATE CONDUCTOR

INVENTOR: Massar, Ernst, Erlangen, Germany, Federal Republic of

SUM:

... member. The tubular insulating member and the superconducting layer are of meander configuration so that during operation of the cryotron adjacent portions of the layer conduct current in opposite directions. This provides a power current cryotron with a layer type gate conductor superconducting layer having a thickness in the order of magnitude of the depth of penetration of a magnetic field into the superconducting layer.

The insulating member may comprise insulating material of cylindrical configuration or a ...

I claim:

[*1] 1. A power current cryotron comprising an insulating member and a layer type gate conductor superconducting layer on the insulating member, said layer having a thickness in the order of magnitude of the depth of penetration of a magnetic field into the superconducting layer, said insulating member and said layer ...

... [*1] during operation of said cryotron adjacent portions of said layer conduct current in opposite directions.

[*2] 2. A power current cryotron comprising a tubular insulating member having an axis and a layer type gate conductor superconducting layer on said insulating member, said layer having a thickness in the order of magnitude of the depth of penetration of a magnetic field into the superconducting layer, said insulating member and said ...

FOCUS - 5 OF 5 PATENTS

PAGE 5

3,611,078

Oct. 5, 1971

STABILIZED AC SUPERCONDUCTOR

INVENTOR: Massar, Ernst, Erlangen, Germany, Federal Republic of
Parsch, Claus-Peter, Erlangen, Germany, Federal Republic of

ABST:

Described is an AC superconductor, comprised of a superconducting layer of type I or II intended for the load current, which is placed with a minimum contact resistance upon a metallic stabilizing layer which during overloading absorbs the current at least partially and temporarily. The stabilizing layer is ...

SUM:

Our invention relates to an AC (alternating current) superconductor, comprised of a superconducting layer of type I or II, provided for a charge current. This layer is applied with a minimum contact resistance upon a metallic stabilizing layer which, during certain periods, absorbs, at least partially, the current ...

DETDESC:

... stabilizing layer, comprised of superconducting material of type III, with a higher critical field intensity for the alternating current. The last-mentioned layer is permitted to have considerably higher losses during an AC load than the layers of type I or II.

Suitable stabilizing layers are, fundamentally, all conventional type III superconductors, e.g. technetium. Niobium/zirconium, for instance, has a critical field strength of 1500 to 2000 Oe for alternating current of ...

... especially preferred, since they can be cooled from the inside and from the outside, for example by means of liquid helium.

According to another development of the invention, especially in the case of tubular AC superconductors, the outer layer of type I or II as well as the successive inner layer of type III need not be thicker, with respect to current carrying capacity, than a few μ , e.g. 1 to 10 μ . Preferably, both layers, e.g. niobium and technetium, are placed upon a copper or aluminum ...

... section is circular, though the superconductor of the present invention is not limited to a circular cross section, even when designed as a tube. The outer layer 1 in the FIG. symbolizes a superconductor layer of type I or II, for example pure lead or pure niobium. Layer 2 should be a superconductor of type III, e.g. technetium, niobium-titanium, niobium-zirconium or niobium-tin. In the example shown ...

... in another coating chamber of the same furnace, niobium can be precipitated out of pure niobium chloride, upon the niobium-tin layer. The stabilizing layer(s) according to the invention and the superimposed superconducting layer of type I or II can also be placed upon a carrier, by

PAGE 6

Pat. No. 3611078, *

FOCUS

using a plasma jet method. Electrolysis processes are also suitable for producing the superconductors, in accordance with the present invention. Technetium, ...

We claim:

[*1] 1. An AC superconductor, comprised of a superconducting layer of type I intended for the load current, which is placed with a minimum contact resistance upon a metallic stabilizing layer of a superconducting material of type III, which during overloading absorbs the current, at least partially and temporarily, said superconductor of type I encloses said superconductor of type III provided for stabilizing purposes in the form of a tube.

[*2] 2. The superconductor of claim 1 wherein the superconducting layer of type I is lead.

[*3] 3. The superconductor of claim 1, wherein the superconductors are concentric tubes.

[*4] 4. The superconductor of claim 3, wherein at least two mutually contacting layers of superconducting material of type III, provided for stabilization, are ...

... [*7] tube upon whose outer wall the superconductor layers are placed.

[*8] 8. The superconductor of claim 5, wherein the thickness of the respective superconducting layer is between 1 and 10 μ .

[*9] 9. An AC superconductor, comprised of a superconducting layer of type II intended for the load current, which is placed with a minimum contact

resistance upon a metallic stabilizing layer of a superconducting material of type III, which during overloading absorbs the current at least ...

... [*11] III, provided for stabilization, are present which have higher critical field strengths for the alternating current the further they are from the superconductor of type II which is provided for the current load.

[*12] 12. The superconductor of claim 9 wherein the superconducting layer of type II is niobium.

* 6 PAGES 154 LINES JOB 69523 100G6J *
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*****02438*****
PAGE 1

LEVEL 1 - 1 OF 225 PATENTS

5,828,093

Oct. 27, 1998

Ceramic capacitor and semiconductor device in which the ceramic capacitor is mounted

INVENTOR: Naito, Yasuyuki, Kyoto, Japan
Sakabe, Yukio, Kyoto, Japan

- ... [*1] by a gap and surrounding said first capacitor electrode.
- [*2] 2. A ceramic capacitor according to claim 1, wherein said ceramic dielectric substrate comprises a substrate for an SrTiO₃ boundary layer type semiconductive capacitor.
- [*3] 3. A ceramic capacitor according to claim 1, further comprising outer electrodes which are mainly made of at least one material selected from the group consisting of Au, Pt and Pd and formed on at ...
- ... [*12] layer is formed on said second principal face of said substrate.
- [*13] 13. A ceramic capacitor according to claim 5, wherein said ceramic dielectric substrate comprises a substrate for an SrTiO₃ boundary layer type semiconductive capacitor.
- [*14] 14. A ceramic capacitor according to claim 5, wherein said first capacitor electrode formed on said first principal face of said ceramic substrate is divided into two parts.
- [*15] 15. ...
- ... [*19] layers disposed respectively on said first and second capacitor electrodes.
- [*20] 20. A ceramic capacitor according to claim 19, wherein said ceramic dielectric substrate comprises a substrate for an SrTiO₃ boundary layer type semiconductive capacitor.
- [*21] 21. A ceramic capacitor according to claim 20, further comprising outer electrodes which are mainly made of at least one material selected from the group consisting of Au, Pt and Pd and formed on at ...
- ... [*25] layer formed on said first principal face of said substrate.
- [*26] 26. A ceramic capacitor according to claim 23, wherein said ceramic dielectric substrate comprises a substrate for an SrTiO₃ boundary layer type semiconductive capacitor.
- [*27] 27. A ceramic capacitor according to claim 23, wherein said first capacitor electrode formed on said first principal face of said ceramic

substrate is divided into two parts.

Pat. No. 5828093, *27

PAGE 2

[*28] 28. ...

PAGE 3

LEVEL 1 - 2 OF 225 PATENTS

5,793,767

<=2> GET 1st DRAWING SHEET OF 21

Aug. 11, 1998

ATM communication device and ATM communication network
system with terminal devices having uniquely assigned
virtual channel identifiers

INVENTOR: Soda, Keiichi, Kanagawa, Japan
Ichihashi, Tatsuki, Kanagawa, Japan
Ushisako, Yukio, Kanagawa, Japan
Kashima, Kazuyuki, Kanagawa, Japan
Yokotani, Tetsuya, Kanagawa, Japan
Hiramatsu, Koichi, Kanagawa, Japan
Shibahara, Makoto, Hyogo, Japan

... [*6] ATM cell transmission section of the first ATM terminal
communication device to the other ATM terminal communication devices is stored
into a segmentation and reassemble sublayer protocol data unit for an ATM
adaptation layer type 3 or 4 in addition to the field of the virtual path
identifier and the virtual channel identifier in the first ATM cell.

[*7] 7. The ATM communication network system of claim 6, wherein the
segmentation and reassemble sublayer ...

... [*8] cell transmission section of the first ATM terminal communication
device to the other ATM terminal communication devices is stored into a common
part convergence sublayer protocol data unit for an ATM adaptation layer type 3
or 4 in addition to the field of the virtual path identifier and the virtual
channel identifier in the first ATM cell.

[*9] 9. The ATM communication network system of claim 8, wherein the common
part convergence ...

... [*10] space to be changed and transmitted from the ATM cell
transmission section to the other ATM terminal communication devices is stored
into a common part convergence sublayer protocol data unit for an ATM adaptation
layer type 5 in addition to the field of the virtual path identifier and the
virtual channel identifier in the first ATM cell.

[*11] 11. The ATM communication network system of claim 10, wherein the
common part convergence sublayer ...

LEVEL 1 - 3 OF 225 PATENTS

PAGE 4

5,774,665

<=2> GET 1st DRAWING SHEET OF 6

Jun. 30, 1998

Asynchronous transfer mode LAN switching hub device using
IEEE P1355 standard and its control method

INVENTOR: Jeong, Seong-Ho, Yusong-ku, Republic of Korea
Kim, Jang-Kyung, Yusong-ku, Republic of Korea
Chong, Il-Young, Seo-ku, Republic of Korea

... [*3] said ATM-to-P1355 module includes: a PHY layer having an ATM physical layer for directly connecting with the ATM network, an ATM layer for executing ATM protocol, an AAL (ATM Adaptation Layer) type layer for executing an ATM adaptable function, a LAN emulation layer for executing LAN emulation function, a bridging/relay layer for executing a bridging and relay function, an ...

PAGE 5

LEVEL 1 - 4 OF 225 PATENTS

5,764,658

<=2> GET 1st DRAWING SHEET OF 36

Jun. 9, 1998

Data receiving apparatus and method

INVENTOR: Sekiguchi, Shun-ichi, Kanagawa, Japan
Murakami, Tokumichi, Kanagawa, Japan
Kato, Yoshiaki, Kanagawa, Japan

... [*1] bit stream of data blocks, each comprising a digital coded bit sequence, which are organized in a hierarchy including a plurality of layers, each layer having associated therewith one of a plurality of layer types, wherein at least one layer of a high-order layer type is composed of at least one layer of a lower-order layer type, each of the data blocks corresponding to one of the layers and including a start code which identifies the layer type of the data block, the apparatus comprising:

a layer memory for storing data indicating the layer type corresponding to the last start code received in the bit stream, the layer memory having a last layer type output,

a first expected start code selector coupled to receive the last layer type output from the layer memory, the first expected start code selector selecting and generating a first expected start code selector output identifying a set of expected start codes based on the last layer type received, wherein start codes of data blocks in the high-order layers are identified as expected start codes before start codes of data blocks in the lower-order layers;

start code ...

... [*1] detected start code, if one of the expected start codes is similar to data in the bit stream, the start code detector having a start code detector output which identifies the detected start code and its corresponding layer type;

means responsive to the start code detector output for updating the layer memory with data indicating the layer type corresponding to the detected start code; and

a block data decoder, responsive to the detected start code output from the start code detector, for decoding the data block corresponding to the detected start code.

[*2] 2. An ...

... [*12] bit stream of data blocks, each comprising a digital coded bit sequence, which are organized in a hierarchy including a plurality of layers, each layer having associated therewith one of a plurality of layer types, wherein at least one layer of a high-order layer type is composed of at least one layer of a lower-order layer type, each of the data blocks corresponding to one of the layers and including a start code which identifies the layer of the data block, the method comprising the steps of:
Pat. No. 5764658, *12

storing data indicating the layer corresponding to the last start code ...

... [*12] a set of expected start codes based upon the data indicating the layer wherein said set of expected start codes lists start codes of data blocks in layers of said high-order layer type before start codes of data blocks in layers of said lower-order layer type;

continuously comparing data in the bit stream with the set of expected start codes;

selecting one of the expected start codes as a detected start code based on the comparison, if one of the expected start ...

LEVEL 1 - 5 OF 225 PATENTS

5,720,851

<=2> GET 1st DRAWING SHEET OF 2

Feb. 24, 1998

Method and arrangement for producing a foam-formed fibre or paper web

INVENTOR: Reiner, Lennart, Matfors, Sweden

... [*11] plurality of dispersion vessels.

[*12] 12. Arrangement according to claim 11, wherein the different fibre types are metered separately from the dispersion vessels up to an inlet box of the paper machine, said inlet box being of multi-layer type.

[*13] 13. Method according to claim 1, wherein the foam-formed fibre web includes a paper web.

[*14] 14. Method according to claim 1, wherein the foamed fibre dispersion is formed by dispersing natural ...

LEVEL 1 - 6 OF 225 PATENTS

5,715,250

<=> GET 1st DRAWING SHEET OF 4

Feb. 3, 1998

ATM-lan connection apparatus of a small scale capable of connecting terminals of different protocol standards and ATM-lan including the ATM-lan connection apparatus

INVENTOR: Watanabe, Ayumi, Tokyo, Japan

... [*1] first ATM terminal for receiving as a first reception cell a first ATM cell supplied from said first ATM terminal;

a first AAL5-SAR (ATM Adaptation Layer type 5-Segmentation And Reassembly) section for reassembling said first reception cell into a first AAL5 packet to output said first AAL5 packet as a first LAN emulation frame;

...

... [*3] first ATM terminal for receiving as a first reception cell a first ATM cell supplied from said first ATM terminal;

a first AAL5-SAR (ATM Adaptation Layer type 5-Segmentation And Reassembly) section for reassembling said first reception cell into a first AAL5 packet to output said first AAL5 packet as a first LAN emulation frame;

...

LEVEL 1 - 7 OF 225 PATENTS

5,714,403

<=> GET 1st DRAWING SHEET OF 3

Feb. 3, 1998

Process for producing a matrix of "all optical" vertically-structured quantum well components

INVENTOR: Nissim, Yves, Paris, France
Bensoussan, Marcel, Boulogne, France
Oudar, Jean-Louis, Chatenay Malabry, France
Rao, Elchuri, Issy Les Moulineaux, France

... [*2] in that the quantum well layer is a binary, ternary or quaternary GaAs or InP-based III-V semiconductor.

[*3] 3. A process according to claim 2, characterized in that the quantum well active layer is of the type GaAs/Ga[1-x]Al[x]As with $0 \leq x \leq 1$, or GaAs/Ga[1-x]In[x]As with $0 \leq x \leq 1$ or InP/In[x]Ga[1-x] ...

... [*3] In[x]Ga[1-x]As[y]P[1-y] with $0 \leq x \leq 1$ and with $0 \leq y \leq 1$.

[*4] 4. A process according to claim 1, characterized in that the positive layer is of type Si[x]N[y] or possibly SiO[x]N[y], with y, in the latter case, being small enough to enable the SiO[x]N[y] based layer to behave as a positive layer.

[*5] 5. A process according to claim 1, characterized in that the negative layer is of type Si[x]N[y] or possibly SiO[x]N[y], with y being small enough to enable the SiO[x]N[y] based layer to behave as a negative layer.

[*6] ...

PAGE 10

LEVEL 1 - 8 OF 225 PATENTS

5,702,792

<=2> GET 1st DRAWING SHEET OF 8

Dec. 30, 1997

Optical recording medium

INVENTOR: Iida, Tetsuya, Tsurugashima, Japan
Jinno, Satoshi, Tsurugashima, Japan
Higuchi, Takanobu, Tsurugashima, Japan

What is claimed is:

[*1] 1. An optical recording medium of a multi-layer type comprising:

a substrate

a single or plural spacer layers each carrying pits and/or grooves;

a single or plural reflective layers layered on the spacer layers; and

wherein said reflective layer is made of a ...

... [*1] OH groups and a surface of said reflecting layer furthest from said substrate contacting with said spacer layer is provided with a silane coupling treatment.

[*2] 2. An optical recording medium of a multi-layer type comprising:
a substrate

a single or plural spacer layers each carrying pits and/or grooves;

a single or plural reflective layers layered on the spacer layers; and

wherein said reflective layer is made of one or ...
LEVEL 1 - 9 OF 225 PATENTS

5,693,085

<=2> GET 1st DRAWING SHEET OF 6

Dec. 2, 1997

Stent with collagen

INVENTOR: Buirge, Andrew W., Minneapolis, Minnesota
Buscemi, Paul J., Long Lake, Minnesota
Burmeister, Paul H., Maple Grove, Minnesota

... [*21] combination of claim 20 wherein the collagen material includes Type I and Type IV layers.

[*22] 22. The combination of claim 21 wherein the Type IV is SIS.

[*23] 23. The combination of claim 22 wherein the Type IV is the innermost layer and the Type I layer includes a drug.

[*24] 24. The combination of claim 17 wherein the stent is of variable diameter.

[*25] 25. The combination of claim 24 wherein the stent is of the self-expanding type.

[*26] 26. The combination of claim 17 wherein the liner has ...
PAGE 12

LEVEL 1 - 10 OF 225 PATENTS

5,668,353

<=2> GET 1st DRAWING SHEET OF 7

Sep. 16, 1997

Input panel avoiding interference pattern and method of forming the same

INVENTOR: Matsuda, Genichi, Kawasaki, Japan
Tanaka, Toshiaki, Kawasaki, Japan

What is claimed is:

- [*1] 1. An input panel of a resistance layer type comprising:
a first board having a first transparent conductive layer on one surface;
a second board having a second transparent conductive layer on one surface,
said first board and said ...
- ... [*3] as claimed in claim 1, wherein said second spacers are arranged at intervals from 0.5 mm to 20 mm, and said first spacers are arranged at smaller intervals.
- [*4] 4. An input panel of a resistance layer type comprising:
a first board having a first transparent conductive layer on one surface;
a second board having a second transparent conductive layer on one surface,
said first board and said ...
- ... [*4] first spacers have such a height smaller than that of said second spacers that an appropriate input sensitivity of said input panel can be achieved.
- [*5] 5. A method of forming an input panel of a resistance layer type, said method comprising the steps of:
a) forming first spacers on a first transparent conductive layer formed on a first board, said first spacers being non-conductive and having a height ...

PAGE 13

LEVEL 1 - 11 OF 225 PATENTS

5,665,502

<=2> GET 1st DRAWING SHEET OF 1

Sep. 9, 1997

Electrophotographic photoreceptor and method for producing the photoreceptor

INVENTOR: Ohashi, Kunio, Nara, Japan
Tokuyama, Mitsuru, Nara, Japan
Kinashi, Hiroshi, Kyoto, Japan
Nozomi, Mamoru, Kanagawa, Japan

Umehara, Tadashi, Niigata, Japan
Asari, Toshiya, Kanagawa, Japan

... [*8] a developing gap holding jig, and in a region in contact with a cleaner.

[*9] 9. An electrophotographic photoreceptor as claimed in claim 1, wherein said photoconductive layer is a laminated layer type photoconductive layer comprising at least a charge generating layer and a charge transfer layer, said charge generating layer having a thickness of from 0.1 to 2 μm , and said charge transfer ...

PAGE 14

LEVEL 1 - 12 OF 225 PATENTS

5,647,284

<=2> GET 1st DRAWING SHEET OF 6

Jul. 15, 1997

Method and apparatus for shipping knobbed glass cookware covers

INVENTOR: Frysinger, Eric T., Groveport, Ohio
Pirello, Joe, Reynoldsburg, Ohio

... [*3] layer of said type of goods may be placed, the partition further including a plurality of integrally-formed flaps, each flap assuming an upwardly-angled position when one of said projections from a layer of such type of goods stacked immediately underneath the partition projects upward through an opening in the partition formed by said flap,

(c) a substantially rigid top plate for covering a top layer of said type of goods, the plate having a size and shape approximately equal to that of said pallet and including a plurality of equally-spaced holes to accommodate said projections from said top layer of such type of goods when said goods are stacked on a partition there beneath, said top plate further including substantially square notches inwardly-formed into its corners to complementarily engage vertical corner posts on said pallet so ...

LEVEL 1 - 13 OF 225 PATENTS

5,642,188

<=2> GET 1st DRAWING SHEET OF 2

Jun. 24, 1997

Wet-type electrophotographic image formation method

INVENTOR: Mochizuki, Manabu, Yokohama, Japan
Kurotori, Tsuneo, Tokyo, Japan
Ariyama, Kenzo, Yokohama, Japan
Kojima, Kenji, Tokyo, Japan

PAGE 15

Tsuruoka, Ichiro, Tokyo, Japan
Echigo, Katsuhiko, Yokohama, Japan
Miyao, Mayumi, Tokyo, Japan

... [*1] said silicone oil, and said photoconductive member is an organic photoconductive member.

[*2] 2. The wet-type image formation apparatus as claimed in claim 1, wherein said organic photoconductor is of a single layer type in which a charge generating material and a charge transporting material are contained.

[*3] 3. The wet-type image formation apparatus as claimed in claim 1, wherein said photoconductive layer comprises (...

... [*9] said silicone oil, and said photoconductive member is an organic photoconductive member.

[*10] 10. The wet-type image formation apparatus as claimed in claim 9, wherein said organic photoconductor is of a single layer type in which a charge generating material and a charge transporting material are contained.

[*11] 11. The wet-type image formation apparatus as claimed in claim 9, wherein said photoconductive layer comprises (...
LEVEL 1 - 14 OF 225 PATENTS

PAGE 16

5,636,097

<=2> GET 1st DRAWING SHEET OF 3

Jun. 3, 1997

Protective circuit for semiconductor power device

INVENTOR: Palara, Sergio, Catania, Italy
Sueri, Stefano, Catania, Italy

... [*1] second circuit means comprise a condenser in an N + /P junction located in an epitaxial region contained within an insulation well of the type P in turn contained in an epitaxial layer of the type N - grown on a substrate of the type N + , and an NPN transistor having as the collector an enriched region of the type n + of said epitaxial region, as the base said insulation well of the type P and as the ...

... [*7] second circuit means comprise a condenser in an N + /P junction located in an epitaxial region contained within an insulation well of the type P in turn contained in an epitaxial layer of the type N-grown on a substrate of the type N + , and an NPN transistor having as the collector an enriched region of the type n + of said epitaxial region, as the base said insulation well of the type P and as the ... LEVEL 1 - 15 OF 225 PATENTS

PAGE 17

5,623,181

Apr. 22, 1997

Multi-layer type light emitting device

INVENTOR: Suehiro, Yoshinobu, Gyoda, Japan
Yamazaki, Shigeru, Gyoda, Japan
Sato, Takashi, Gyoda, Japan

What is claimed is:

- [*1] 1. A multi-layer type light emitting device, comprising:
at least two light emitting sources, successively disposed along a light-transmitting path, including a rearmost source at a rear end of the path and a ...
... [*1] direction rays of light emitted by each source except the rearmost source, and for transmitting therethrough in the forward direction rays of light emitted by the rearmost source.
- [*2] 2. A multi-layer type light emitting device according to claim 1, which further comprises a reflection surface disposed so as to correspond to said rearmost light emitting source, for reflecting rays of light emitted by said rearmost light emitting source and radiating the rays of light in the forward direction.
- [*3] 3. A multi-layer type light emitting device according to claim 1, wherein said light emitting sources emit rays of light with different luminous wavelength ranges, respectively.
- [*4] 4. A multi-layer type light emitting device according to claim 3, wherein said light emitting sources include ones emitting rays of red or nearly red light, green or nearly green light and blue or nearly blue light respectively.
- [*5] 5. A multi-layer type light emitting device according to claim 1, wherein at least one of said light emitting sources emits ray of light with two or more luminous wavelength ranges.
- [*6] 6. A multi-layer type light emitting device according to claim 1, wherein said at least two light emitting sources includes three light emitting sources, and wherein the respective optical surface for each light emitting source except the rearmost source each reflects rays of light emitted by said light emitting source with approximately the same luminous intensity distribution characteristics.
- [*7] 7. A multi-layer type light emitting device according to claim 1, wherein said optical surface is a light semi-transmissible thin film reflection surface, or said optical surface is formed by a method wherein reflection

portions are partially formed on a light transmissible surface.

18

Pat. No. 5623181, *7

[*8] 8. A multi-layer type light emitting device according to claim 1, wherein said optical surface is a wavelength selective surface.

[*9] 9. A multi-layer type light emitting device according to claim 8, wherein said optical surface is a dichroic mirror formed by multi-layering of thin films having different refractive indexes.

[*10] 10. A multi-layer ...

... [*10] each of said optical surface and said reflection surface of each of said sources is a concave surface facing a luminous surface of said at least one LED chip.

[*11] 11. A multi-layer type light emitting device according to claim 10, wherein the respective optical surface and said LED chip of each source, except the rearmost source, and said reflection surface and said LED chip are each integrally formed of a first light transmissible material, thereby forming respective LEDs.

[*12] 12. A multi-layer type light emitting device according to claim 11, wherein each LED is disposed in such a manner that a front surface thereof is complementary to and closely connected with a rear surface of an LED of a source positioned forward thereof.

[*13] 13. A multi-layer type emitting device according to claim 11, further comprising a second light transmissible material having a refractive index approximately the same as that of the first light transmissible material filling a space ...

... [*15] surface or said reflection surface for the source having the LED chip, and

wherein said optical surface is formed on a front surface of the light transmissible material sealing the LED of the rearmost source.

[*16] 16. A multi-layer type light emitting device according to claim 11, wherein an incident surface is provided on the path rearward of each optical surface, in spaced relation thereto, further comprising a further light transmissible material filling ...

... [*16] optical surface, wherein rays of light emitted on the path rearward of the incident surface in the forward direction pass through the incident surface, the further light transmissible material and the optical surface.

[*17] 17. A multi-layer type light emitting device according to claim 1, wherein the at least two light emitting sources includes at least three light

emitting sources, successively disposed along the light-transmitting path, the at least three ...

... [*17] source, each optical surface transmitting therethrough in the forward direction rays of light emitted by each rear source that is disposed between the optical surface and the rear end.

Pat. No. 5623181, *17

PAGE 19

[*18] 18. A multi-layer type light emitting device, comprising:

at least two light emitting sources, successively disposed along a light-transmitting path, including a rearmost source at a rear end of the path and a ...

... [*18] transmitting therethrough in the forward direction rays of light emitted by the rearmost source;

wherein each of the light emitting sources, except the rearmost source, is a semiconductor LED chip.

[*19] 19. A multi-layer type light emitting device according to claim 18, wherein the at least two light emitting sources includes at least three light emitting sources, successively disposed along the light-transmitting path, the at least three ...

... [*19] source, each optical surface transmitting therethrough in the forward direction rays of light emitted by each rear source that is disposed between the optical surface and the rear end.

[*20] 20. A multi-layer type light emitting device, comprising:

at least two light emitting sources, successively disposed along a light-transmitting path, including a rearmost source at a rear end of the path and a ...

... [*20] flat optical board formed of a light transmissible material, the light transmissible material having an annular optical surface surrounding a side surface of the at least one LED chip.

[*21] 21. A multi-layer type light emitting device according to claim 20, wherein the at least two light emitting sources includes at least three light emitting sources, successively disposed along the light-transmitting path, the at least three ...

LEVEL 1 - 16 OF 225 PATENTS

PAGE 20

5,605,051

<=2> GET 1st DRAWING SHEET OF 83

Feb. 25, 1997

Automotive air conditioner having condenser and evaporator
provided within air duct

INVENTOR: Iritani, Kunio, Anjo, Japan
Numazawa, Shigeo, Nagoya, Japan
Fujiwara, Kenichi, Kariya, Japan
Yamanaka, Yasushi, Nakashima-gun, Japan
Isaji, Akira, Nishio, Japan
Suzuki, Takahisa, Kariya, Japan
Sanada, Ryoichi, Kariya, Japan

... [*13] converting a variation of temperature of the refrigerant flowing
from said condenser into a variation of pressure.

[*14] 14. An automotive air conditioner according to claim 13, wherein said
condenser and said subcooler are formed as one layer type heat exchanger having
a large number of tubes serving as refrigerant passageway, a large number of
heat radiating fins layered alternately with the tubes, and a pair of headers
disposed on the opposite ends of the tubes.

[*15] 15. An automotive air conditioner according to claim 14, wherein said
layer type heat exchanger comprises a partition plates in said headers in order
that refrigerant flow is turned back and a mounting pipe for mounting said
temperature sensitive tube.

[*16] 16. An ...

LEVEL 1 - 17 OF 225 PATENTS

5,589,960

<=2> GET 1st DRAWING SHEET OF 4

Dec. 31, 1996

Liquid crystal display system

INVENTOR: Chiba, Masao, Saitama, Japan
Ishii, Mikio, Saitama, Japan

What is claimed is:

[*1] 1. A double-layer type super-twisted nematic liquid crystal display
system comprising:

a dot-matrix type liquid crystal display device for displaying at least one
of characters and graphic forms;

a compensating ...

... [*1] crystal display device and said compensating liquid crystal device are driven with said drive voltages which are adjusted according to the calculation of contrast made with the aid of said light detecting means.

[*2] 2. A double-layer type super twisted nematic liquid crystal display system according to claim 1, further comprising:

a voltage memory circuit for storing most recent values of said drive voltages while said system is an off state to provide initial drive voltage values for when said system is switched to an on state.

[*3] 3. A double-layer type super-twisted nematic liquid crystal display system comprising:

a dot-matrix type liquid crystal display device for displaying at least one of characters and graphic forms;

a compensating ...

... [*3] said light detecting means and said liquid crystal display has a luminance measuring region which is turned on and off for measurement of the contrast of said liquid crystal display device.

[*4] 4. A double layer type super-twisted nematic liquid crystal display system comprising:

a dot-matrix type liquid crystal display device for displaying at least one of characters and graphic forms;

a compensating ...

... [*4] liquid crystal display device has a luminance measuring region which is divided into two parts which are alternately turned on and off for measurement of the contrast of said liquid crystal display device.

AGE 22

Pat. No. 5589960, *4

[*5] 5. A double layer type super-twisted nematic liquid crystal display system comprising:

a dot-matrix type liquid crystal display device for displaying at least one of characters and graphic forms;

a compensating ...

LEVEL 1 - 18 OF 225 PATENTS

5,580,816

<=2> GET 1st DRAWING SHEET OF 5

Dec. 3, 1996

Local oxidation process for high field threshold applications

INVENTOR: Hemmenway, Donald F., Melbourne, Florida
Pearce, Lawrence G., Palm Bay, Florida

... [*1] another;

providing an implant of a dopant species in a defined field region adjacent two of the device regions, said implant of sufficient energy and concentration to impart nucleation sites within the device layer of the type known to result in stacking faults during oxide growth conditions;

providing a thickness of thermally grown silicon dioxide in the field regions by thermally processing the structure to remove nucleation ...
24

LEVEL 1 - 19 OF 225 PATENTS

5,575,418

<=2> GET 1st DRAWING SHEET OF 12

Nov. 19, 1996

Corrugated paperboard package systems with gas-permeable plastic membranes for modified atmosphere packaging of fresh fruits and vegetables and cut flowers

INVENTOR: Wu, Chiu H., Vancouver, Canada
Oikarinen, Juhani I., Lahti, Finland
Matstoms, Bo, Orebro, Sweden
Powrie, William D., North Vancouver, Canada

... [*9] paperboard combination so that no natural pinholes are formed.

[*10] 10. A paperboard as claimed in claim 1 wherein the overall permeability of the paperboard combination is regulated in part by regulating the composition of the polymer layer and the type of kraft paper.

[*11] 11. A paperboard as claimed in claim 1 wherein the polymer is selected from the group consisting of ethylene vinylacetate (EVA), ethylbutyl acetate (EBA), a crosslinked ionomer resin, cast ...

LEVEL 1 - 20 OF 225 PATENTS

5,570,084

<=2> GET 1st DRAWING SHEET OF 7

Oct. 29, 1996

Method of loose source routing over disparate network types in a packet communication network

INVENTOR: Ritter, Michael W., Los Altos, California
Bettendorff, John, San Jose, California
Flammer, III, George H., Cupertino, California
Galloway, Brett D., Campbell, California

What is claimed is:

- [*1] 1. A method for digital packet communication between nodes in disparate networks including path unaware network layer types and path aware network layer types, said method comprising:
- a) receiving a typed encapsulating packet which encapsulates a path-addressed packet at a first network layer, said first network layer being path aware;
- ...
- ... [*1] path aware protocol if said second network layer is path aware.
- [*2] 2. A method for digital packet communication between nodes in disparate networks including path unaware network layer types and path aware network layer types, said method comprising:
- a) receiving an encapsulating packet which encapsulates a path-addressed packet at a first network layer of a first type;
- b) if said first type is path unaware, ...
- ... [*6] type of the received packet; and
- relaying the received packet to an appropriate network router.

[*7] 7. A method for digital packet communication between nodes in various networks including path aware network layer types, said method comprising:

- a) designating a destination path element for a packet by means of a type-length-value element specific only to one station of a group of ...

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LEVEL 1 - 21 OF 225 PATENTS

5,555,347

<=2> GET 1st DRAWING SHEET OF 24

Sep. 10, 1996

Method and apparatus for controlling a robot using a neural network

INVENTOR: Yoneda, Takao, Nagoya, Japan
Komura, Katsuhiro, Takahama, Japan

... [*2] accordance with the second joint angle vector calculated by said second calculation means.

[*3] 3. An apparatus for controlling an articulated robot according to claim 2, wherein said neural network is of a three layer type which is composed of an input layer, an intermediate layer and an output layer.

[*4] 4. An apparatus for controlling an articulated robot according to claim 2, further comprising:

actual position measurement means for measuring the actual ...

GE 27

LEVEL 1 - 22 OF 225 PATENTS

5,545,945

<=2> GET 1st DRAWING SHEET OF 1

Aug. 13, 1996

Thermionic cathode

INVENTOR: Branovich, Louis E., Howell, New Jersey
Eckart, Donald W., Wall, New Jersey
Fischer, Paul, Oakhurst, New Jersey

... [*2] emissions.

[*3] 3. A thermionic cathode as recited in claim 2 wherein the cathode is an impregnant-type cathode.

[*4] 4. A thermionic cathode as recited in claim 2 wherein the cathode is a layer-type cathode.

[*5] 5. An enhanced electron emission thermionic cathode, comprising:

a base material having a composition including Barium and Tungsten; and

an overcoating of emissive material forming an emissive surface on said base material;

...

LEVEL 1 - 23 OF 225 PATENTS

5,525,541

<=2> GET 1st DRAWING SHEET OF 6

Jun. 11, 1996

Method of making an electronic and/or photonic component

INVENTOR: Krauz, Philippe, Creteil, France
Rao, Elchuri K., Issy-Les-Moulineaux, France

... [*1] region of the quantum well layer on which the dielectric layer is deposited to confer on said region electro-optical or photonic properties that correspond to said function.

[*2] 2. A method according to claim 1, wherein the quantum well layer is of the type based on GaAs and on InP.

[*3] 3. A method according to claim 2, wherein the quantum well layer is of one of the following types: GaAs/GaAlAs; InGaAs/Ga(Al)As; InGaAs/InAlAs; InGaAs/InP; and ...

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LEVEL 1 - 24 OF 225 PATENTS

5,504,558

<=2> GET 1st DRAWING SHEET OF 1

Apr. 2, 1996

Electrophotographic photosensitive member, and
electrophotographic apparatus and device unit employing the
same

INVENTOR: Ikezue, Tatsuya, Yokohama, Japan

... [*11] photosensitive member according to claim 10, wherein the charge-transporting layer has a thickness of from 15 to 30 μ m.

[*12] 12. An electrophotographic photosensitive member according to claim 1, wherein the photosensitive layer is of a single layer type.

[*13] 13. An electrophotographic photosensitive member according to claim 12, wherein the photosensitive layer has a thickness of from 10 to 35 μ m.

[*14] 14. An electrophotographic photosensitive member according to claim 13, wherein the photosensitive layer has a ...

LEVEL 1 - 25 OF 225 PATENTS

5,489,372

Feb. 6, 1996

Process for producing light absorption layer of solar cell

INVENTOR: Hirano, Tomio, Susono, Japan

PAGE 30

... [*7] indium plating bath with a dispersion of fine particles of selenium suspended therein to form a multi-layer electrodeposited layer including copper, indium, and selenium on said conductive substrate; and

heat-treating the multi-layer type electrodeposition layer to convert it into a ternary alloy layer of copper-indium-selenium.

[*8] 8. The process according to claim 7, wherein said copper plating bath is a sulfuric acid type electrodeposition bath which ...
LEVEL 1 - 26 OF 225 PATENTS

5,475,700

<=2> GET 1st DRAWING SHEET OF 5

Dec. 12, 1995

Laser diode with electron and hole confinement and barrier layers

INVENTOR: Iwata, Hiroshi, Tokyo, Japan

... [*11] indices of said hole confinement layer and said electron confinement layer.

[*12] 12. A laser diode as claimed in claim 11, wherein said hole confinement layer and said electron confinement layer are type II compound layers.

[*13] 13. A laser diode as claimed in claim 11, wherein said hole confinement layer and said electron confinement layer are type II superlattice layers.

[*14] 14. A laser diode as claimed in claim 11, wherein said hole potential in said hole confinement layer increases with distance away from said interface with ...

LEVEL 1 - 27 OF 225 PATENTS

5,466,892

<=2> GET 1st DRAWING SHEET OF 3

Nov. 14, 1995

Circuit boards including capacitive coupling for signal transmission and methods of use and manufacture

INVENTOR: Howard, James R., Santa Clara, California
Lucas, Gregory L., Newark, California

... [*3] between sets of the additional signal and receptor pads on the first and second conductive layers also for electrostatic transmission of AC signals therebetween.

[*4] 4. The circuit board of claim 1 wherein the circuit board is of a multi-layer type having at least a third conductive layer and further wherein the additional conductive circuit means on the adjacent pairs of the first, second and third conductive layers form additional signal and receptor pads separated by additional ...

... [*9] coupling between sets of the additional signal and receptor pads on the first and second conductive layers also for electrostatic transmission of AC signals therebetween.

[*10] 10. The method of claim 7 wherein the circuit board is of a multi-layer type having at least a third conductive layer and further wherein the additional conductive circuit means on the adjacent pairs of the first, second and third conductive layers form additional signal and receptor pads separated by additional ...

... [*13] in the AC signal transmitting circuit whereby capacitive reactance and inductive reactance approach equality in order to optimize capacitive coupling.

[*14] 14. The circuit board of claim 13 wherein the circuit board is of a multi-layer type having at least a third conductive layer and further wherein the additional conductive circuit means on the adjacent pairs of the first, second and third conductive layers form additional signal and receptor means separated by additional ...

LEVEL 1 - 28 OF 225 PATENTS

5,466,609

<=2> GET 1st DRAWING SHEET OF 5

Nov. 14, 1995

Biodegradable gelatin-aminodextran particle coatings of and processes for making same

INVENTOR: Siiman, Olavi, Davie, Florida
Burshteyn, Alexander, Hialeah, Florida
Gupta, Ravinder K., Pembroke Pines, Florida

CORE TERMS: gelatin, magnetic, particle, antibody, aminodextran, cell, bead, sample, ferrite, coating, minute, suspension, depletion, coated, tube, biological, rbc, crosslinked, sulphydryl, mixed, conjugated, aqueous, layer, crosslinking, granulocyte, maleimidyl, preparation, wbc, dextran, manganese

We claim:

[*1] 1. Colloidal particles having a plurality of pendent functional groups on an exterior coating of aminodextran in which each particle comprises a solid metallic core coated with a first gelatin layer of type B, alkali cured gelatin of Bloom in the range 60 to 225 and a second layer of an aminodextran, said layers having been either (a) crosslinked by the action of a chemical crosslinking agent or (b) ...

... [*16] preparing discrete colloidal particles having a plurality of pendent functional groups on an exterior coating of aminodextran in which each particle comprises a solid metallic core coated either with biodegradable, crosslinked or condensed layers of type B, alkali cured gelatin of Bloom 60 to 225 and an aminodextran, said process comprising;

(a) (i) (1) preparing metallic core particles in said gelatin or (2) adsorbing as a ...

LEVEL 1 - 29 OF 225 PATENTS

5,465,103

<=2> GET 1st DRAWING SHEET OF 6

Nov. 7, 1995

Display device with coordinate input function

INVENTOR: Yoshioka, Kazuo, Nagasaki, Japan

... [*1] for both displaying images and inputting coordinates, comprising:
a sensor means for sensing coordinate input detection signals from a control means;

a liquid crystal display panel of two-layer type including an optical phase compensation cell, as a first layer of the liquid crystal display panel and a liquid crystal display cell as a second layer of the liquid crystal display ...

LEVEL 1 - 30 OF 225 PATENTS

5,441,516

<=2> GET 1st DRAWING SHEET OF 5

Aug. 15, 1995

Temporary stent

INVENTOR: Wang, Lixiao, Maple Grove, Minnesota
Willard, Martin R., Maple Grove, Minnesota
Tran, Thomas T., Coon Rapids, Minnesota
Hastings, Roger, Maple Grove, Minnesota

Schmaltz, Dale F., Boulder, Colorado
Holman, Thomas J., Minneapolis, Minnesota

... [*15] closely wound helices each comprises at least two oppositely wound windings forming multiple layers.

[*16] 16. The apparatus of claim 1 wherein the closely wound helices are each of at least the two filar double layer type.

[*17] 17. The apparatus of claim 16 wherein the closely wound helices are of at least the four filar double layer type.

[*18] 18. The apparatus of claim 1 wherein a proximal elongate portion of the outer tubular member is comprised of a polymeric/braided composite joined to a distal wire wound portion.

[*19] 19. The apparatus of claim 18 wherein the polymeric portion of the composite is polyimide.

[*20] 20. The apparatus of claim 18 wherein the wire wound portion is of at least the four filar double layer type.

[*21] 21. The apparatus of claim 1 wherein a proximal elongate portion of the inner tubular member is comprised of a polymeric/braided composite joined to a distal wire wound portion.

[*22] 22. The apparatus of claim 21 wherein the polymeric portion of the composite is polyimide.

[*23] 23. The apparatus of claim 21 wherein the wire wound portion is of at least the four filar double layer type.

[*24] 24. The apparatus of claim 1 including means connected to the proximal end portion of the catheter for introducing infusion fluid through one of the tubular members.

[*25] 25. The apparatus of claim 24 wherein the infusion fluid ...
PAGE 36

LEVEL 1 - 31 OF 225 PATENTS

5,432,038

<=2> GET 1st DRAWING SHEET OF 1

Jul. 11, 1995

Process for producing an organic photosensitive material
preventing blushing

INVENTOR: Katsukawa, Masato, Osaka, Japan
Tanaka, Masashi, Osaka, Japan

... [*2] process for production according to claim 1, wherein the coefficient k is a number which is 0.13 or smaller.

[*3] 3. A process for production according to claim 1, wherein said electrophotographic photosensitive material is of the single layer type containing a charge-generating material, a charge-transporting material and a binder resin.

[*4] 4. A process for production according to claim 1, wherein said weight percentage (C) is from 0.1 to ...

LEVEL 1 - 32 OF 225 PATENTS

5,428,244

<=2> GET 1st DRAWING SHEET OF 12

Jun. 27, 1995

Semiconductor device having a silicon rich dielectric layer

INVENTOR: Segawa, Mizuki, Kyoto, Japan
Kato, Yoshiaki, Hyogo, Japan
Nakaoka, Hiroaki, Osaka, Japan

... [*3] A semiconductor device as in either claim 1 or claim 2, further comprising a dielectric layer for passivation, said passivation dielectric layer being formed on said dielectric layer type, being composed of a chemical compound which is the same compound that said dielectric layer is composed of, and having a silicon content closer to a silicon content according to the stoichiometric composition formula, compared to the dielectric layer.

[*4] ...

LEVEL 1 - 33 OF 225 PATENTS

5,428,052

<=2> GET 1st DRAWING SHEET OF 2

May 30, 1995

Method of fabricating a semiplanar heterojunction bipolar transistor

INVENTOR: Morris, Francis J., Plano, Texas
Yang, Jau-Yuann, Richardson, Texas
Plumton, Donald L., Dallas, Texas
Yuan, Han-Tzong, Dallas, Texas

... [*1] layer;

forming a collector plug region through a selected portion of the collector layer to the subcollector layer;

forming a base layer on the collector layer and the collector plug region;
forming an emitter layer type on the base layer;
forming an emitter cap layer on the emitter layer;
forming a collector contact on the collector plug region;
forming an emitter contact on the emitter cap layer;
forming a base contact on the ...

PAGE 39

LEVEL 1 - 34 OF 225 PATENTS

5,401,549

Mar. 28, 1995

Optical information recording medium

INVENTOR: Watase, Kenta, Tokyo, Japan

... [*1] layer is overlaid on both said reflective layer in said ROM region portion and a recording portion of the substrate in said recording region, said recording layer being of a multi-layer type comprising a dielectric layer and a magnetic layer.

[*2] 2. The optical information recording medium as claimed in claim 1, further comprising an additional reflective layer which is overlaid on said recording ...

PAGE 40

LEVEL 1 - 35 OF 225 PATENTS

5,390,208

<=2> GET 1st DRAWING SHEET OF 3

Feb. 14, 1995

Strained quantum well type semiconductor laser device

INVENTOR: Kasukawa, Akihiko, Tokyo, Japan
Kikuta, Toshio, Tokyo, Japan

What is claimed is:

[*1] 1. A strained quantum well layer type semiconductor laser device comprising a light emitting active layer of a multilayer structure including a quantum well layer and a barrier layer and a pair of light confining layers ...

... [*1] $y P 1 - y$ ($0 < y \leq 1$) and the barrier layer and/or the light confining layers are made of In 1 - x Ga x P ($0 < x \leq 1$).

[*2] 2. A strained quantum well layer type semiconductor laser device according to claim 1, wherein the InAs y P 1 - y strained quantum well layer satisfies inequality:

SYMBOL OMITTED epsilon w x L w SYMBOL OMITTED < 45(% x nm),

where w is the ratio of deformation (%) and Lw is the thickness (nm) of each component layer of the strained quantum well layer.

[*3] 3. A strained quantum well layer type semiconductor laser device according to claim 1, wherein the In 1 - x Ga x P barrier layer and each of the In 1 - x Ga x P light confining layers satisfy ...

... [*3] OMITTED < 45(% x nm),

where s is the ratio of deformation (%) and Ls is the thickness (nm) of each component layer of the barrier layer and the light confining layers.

[*4] 4. A strained quantum well layer type semiconductor laser device according to claim 1, wherein InAs y P 1 - y ($\theta < y \leq 1$) has a value for compositional ratio y between 0.3 and 0.6.

LEVEL 1 - 36 OF 225 PATENTS

5,387,564

Feb. 7, 1995

Molding and calcining of zeolite powder

INVENTOR: Takeuchi, Tatsuro, Tsukuba, Japan
Mouri, Motoya, Tsuchiura, Japan
Okabayashi, Saji, Kitakanbara, Japan
Miyamura, Shoichi, Kitakanbara, Japan

... [*21] a) a zeolite;

(b) a beta 1,3-glucan in an amount of 0.1-20 parts by weight in relation to 100 parts by weight of the zeolite; and

(c) a 1:1 layer-type clay mineral and a 2:1 layer clay mineral in a total amount of 5-50 parts by weight in relation to 100 parts by weight of the zeolite; and

(ii) at least ...

LEVEL 1 - 37 OF 225 PATENTS

5,374,328

<=2> GET 1st DRAWING SHEET OF 9

Dec. 20, 1994

Method of fabricating group III-V compound

INVENTOR: Remba, Ronald D., Sunnyvale, California
Brunemeier, Paul E., Sunnyvale, California
Schmukler, Bruce C., Mountain View, California
Striffler, Walter A., Sunnyvale, California
Rosenblatt, Daniel H., Belmont, California

... [*5] 1-x As wherein $(0 \leq x \leq 1)$ and $(0.2 \leq x \leq 1.0)$.

[*6] 6. A method of making a semiconductor device comprising the steps of:
fabricating a structure by

(i) growing one or more layers of the type X a Y 1-a As, where X is an atom selected from the group of IIIA atoms and Y is a different atom selected from the group of IIIA atoms, and where $(0 \leq a \leq 1)$ upon a semiconductor ...

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LEVEL 1 - 38 OF 225 PATENTS

5,324,980

<=> GET 1st DRAWING SHEET OF 24

Jun. 28, 1994

Multi-layer type semiconductor device with semiconductor element layers stacked in opposite direction and manufacturing method thereof

INVENTOR: Kusunoki, Shigeru, Hyogo, Japan

What is claimed is:

[*1] 1. A multi-layer type semiconductor device, comprising:

a substrate having a main surface;

a first semiconductor element layer formed on said main surface of said substrate and including a first semiconductor element having an active ...

... [*3] insulating layer.

[*4] 4. The device of claim 3, including a conductor filling said through-hole and contacting opposite surfaces of said first and second semiconductor element layers.

[*5] 5. A multi-layer type semiconductor device, comprising:

a substrate having a main surface;

a first semiconductor element layer formed on said main surface of said substrate and including a first semiconductor element having an active ...

... [*5] contact with said insulating layer and being oriented back-to-back on said first and second semiconductor element layers, each of said regions including one or more of the semiconductor elements.

[*6] 6. A multi-layer type semiconductor device, comprising:

a substrate having a main surface;

a first semiconductor element layer formed on said main surface of said substrate and including a first semiconductor element having an active ...

... [*6] second semiconductor element layers.

[*7] 7. The device of claim 6, wherein a through-hole is formed only through said field oxide layer and said interlayer insulation film.

[*8] 8. A multi-layer type semiconductor device, comprising:

a substrate having a main surface;

Pat. No. 5324980, *8

a first semiconductor element layer formed on said main surface of said substrate and including a first semiconductor element having an active ...

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LEVEL 1 - 39 OF 225 PATENTS

5,324,678

<=2> GET 1st DRAWING SHEET OF 24

Jun. 28, 1994

Method of forming a multi-layer type semiconductor device
with semiconductor element layers stacked in opposite
directions

INVENTOR: Kusunoki, Shigeru, Hyogo, Japan

What is claimed is:

[*1] 1. A method of manufacturing a multi-layer type semiconductor device comprising the steps of;

forming a base member by successively stacking, on a main surface of a first substrate, a first semiconductor layer, an insulating layer and a second ...

... [*1] semiconductor device by using said first semiconductor layer as a base with an exposed surface of said first semiconductor layer directed upward.

[*2] 2. A method of manufacturing a multi-layer type semiconductor device according to claim 1, wherein the step of forming the base member includes the steps of;

bonding a first member including said first semiconductor layer formed on said first substrate, with a ...

... [*2] said insulating layer and said first semiconductor layer are opposed to each other, and

thinning said third substrate the expose said second semiconductor layer.

[*3] 3. A method of manufacturing a multi-layer type semiconductor device comprising the steps of;

forming perforations through a first substrate;

filling said perforations with conductors,

successively forming a first semiconductor layer on a main surface of a second ...

LEVEL 1 - 40 OF 225 PATENTS

5,291,248

<=2> GET 1st DRAWING SHEET OF 8

Mar. 1, 1994

LED carriage selectively movable in two directions

INVENTOR: Isobe, Minoru, Tokyo, Japan

... [*3] L-shaped first block, an L-shaped second leaf spring having one end fixed to one end of the first block, and the other end fixed to a right end of the frame, a stacked-layer type of second piezoelectric element adapted to deform itself in response to an application of a voltage by a power source for deforming the second leaf spring, the second piezoelectric element being fixed to the ...

... [*5] comprises an L-shaped first block, an L-shaped leaf spring having one end fixed to one end of the first block, and the other end fixed to one end of a frame, a stacked-layer type of second piezoelectric element adapted to deform itself in response to an application of a voltage by a power source for deforming the leaf spring, the second piezoelectric element being fixed to the other ...

... [*18] L-shaped first block, an L-shaped second leaf spring having one end fixed to one end of the first block, and the other end fixed to a right end of the frame, a stacked-layer type of second piezoelectric element adapted to deform itself in response to an application of a voltage by a power source for

deforming the second leaf spring, the second piezoelectric element being fixed to the ...

... [*20] comprises an L-shaped first block, an L-shaped leaf spring having one end fixed to one end of the first block, and the other end fixed to one end of a frame, a stacked-layer type of second piezoelectric element adapted to deform itself in response to an application of a voltage by a power source for deforming the leaf spring, the second piezoelectric element being fixed to the other ...

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LEVEL 1 - 41 OF 225 PATENTS

5,289,486

<=2> GET 1st DRAWING SHEET OF 5

Feb. 22, 1994

Semiconductor luminous element and superlattice structure

INVENTOR: Iga, Kenichi, Machida, Japan
Koyama, Fumio, Hino, Japan
Takagi, Takeshi, Ibaraki, Japan

... [*8] between the active layer and the multi-quantum barrier layer.

[*9] 9. A superlattice structure, comprising alternating layers of at least two types of crystals having different energy gaps,

wherein the energy gaps of adjacent crystal layers are such that the type of crystal having the smaller energy gap of the adjacent layers has an energy gap which is smaller than that of a portion of the superlattice structure on a side through which electrons or holes enter the superlattice structure, and

wherein the thicknesses and structures of the adjacent crystal ...

PAGE 48

LEVEL 1 - 42 OF 225 PATENTS

5,275,714

<=2> GET 1st DRAWING SHEET OF 1

Jan. 4, 1994

Method of producing an absorber layer for solar cells with the aid of electrodeposition

INVENTOR: Bonnet, Dieter, Friedrichsdorf, Federal Republic of Germany
Ehrhardt, Josef, Hochheim/Main, Federal Republic of Germany
Hewig, Gert, Alzenau, Federal Republic of Germany

... [*1] electroplating bath and simultaneously incorporating a third alloy component of Group VIA suspended in the electroplating bath in finely dispersed form by dispersion electrolysis, and

producing a ternary semiconductor layer of the type IB-IIIA-VIA by heat treating the deposited material.

[*2] 2. The method according to claim 1, wherein the volume percentage of each component of the binary alloy is between about 25% and 75%.

[*3] 3. The method ...
LEVEL 1 - 43 OF 225 PATENTS

5,272,031

Dec. 21, 1993

Benzidine derivative and photosensitive material using said derivative

INVENTOR: Hanatani, Yasuyuki, Osaka, Japan
Iwasaki, Hiroaki, Osaka, Japan

... [*2] material containing a conductive substrate having thereon a photosensitive layer which contains the benzidine derivative (1) according to claim 1.

[*3] 3. The photosensitive material according to claim 2, wherein the photosensitive layer is a multi-layer type photosensitive layer comprising an electric charge transferring layer and an electric charge generating layer which are laminated mutually.

[*4] 4. The multi-layer type photosensitive material according to claim 3, wherein the electric charge transferring layer contains 25 to 200 parts by weight of said benzidine derivative (1) for 100 parts by weight of a ...

... [*5] compounds, and pyrrolopyrrole compounds.

[*6] 6. The photosensitive material according to claim 5, wherein the electric charge generating material is an azo compound.

[*7] 7. The photosensitive material according to claim 2, wherein the photosensitive layer is a single-layer type photosensitive layer comprised of an electric charge transferring material, an electric charge generating material and a binding resin.

[*8] 8. The photosensitive material according to claim 7, wherein the single-layer type photosensitive layer contains 40 to 200 parts by weight of said benzidine derivative (1) for 100 parts by weight of a binding resin.

[*9] 9. The photosensitive material according to claim 8, wherein the single-layer type photosensitive layer contains, for 100 parts by weight of a

binding resin, 5 to 500 parts by weight of one or more kinds of an electric charge generating material selected from selenium, ...
LEVEL 1 - 44 OF 225 PATENTS

5,260,723

<=2> GET 1st DRAWING SHEET OF 10

Nov. 9, 1993

Liquid jet recording head

INVENTOR: Naruse, Osamu, Kanagawa, Japan
Ameyama, Minoru, Kanagawa, Japan
Matsumoto, Syuzo, Kanagawa, Japan
Komai, Hiromichi, Kanagawa, Japan
Hirata, Tositaka, Tokyo, Japan

... [*1] between 0.01 Kg/mm^2 > and 300 Kg/mm^2 > .

[*2] 2. A liquid jet recording head as claimed in claim 1 wherein said piezo-electric member is a layer-type piezo-electric member.

[*3] 3. A liquid jet recording head as claimed in claim 1 further comprising a driver unit driving said piezo-electric elements.

[*4] 4. ...

... [*6] flow paths.

[*7] 7. A liquid jet recording head as claimed in claim 6 wherein each of said first piezo-electric member and said second piezo-electric member is a layer-type piezo-electric member.

[*8] 8. A liquid jet recording head as claimed in claim 6 wherein said elasticity member has a modulus of elasticity between 0.01 Kg/mm^2 > and ...

... [*13] elements in a direction perpendicular to said second flow paths.

[*14] 14. A liquid jet recording head as claimed in claim 13 wherein said piezo-electric member is a layer-type piezo-electric member.

[*15] 15. A liquid jet recording head as claimed in claim 13 wherein said elasticity member has a modulus of elasticity between 0.01 Kg/mm^2 > and ...

... [*18] elements in the perpendicular direction to each of said plurality of flow paths.

[*19] 19. A liquid jet recording head as claimed in claim 18 wherein said piezo-electric member is a layer-type piezo-electric member.

[*20] 20. A liquid jet recording head as claimed in claim 18 wherein said piezo-electric member has a plurality of grooves which are formed on said piezo-electric ...

PAGE 51

LEVEL 1 - 45 OF 225 PATENTS

5,258,251

Nov. 2, 1993

Hydrazone compound and photosensitive material using said compound

INVENTOR: Hanatani, Yasuyuki, Sakai, Japan
Iwasaki, Hiroaki, Hirakata, Japan

... [*1] same or different from one another, and each is a hydrogen atom, a halogen atom, an alkyl group or an alkoxy group.

[*2] 2. The photosensitive material according to claim 1, wherein the photosensitive layer is a multi-layer type photosensitive layer including an electric charge transferring layer which includes the hydrazone compound as the electric charge transferring material, and an electric charge generating layer, which layers are laminated mutually.

[*3] 3. The photosensitive material according to claim 2, wherein the electric charge transferring layer of the multi-layer type photosensitive layer further includes a binding resin, and the electric charge transferring layer contains 25 to 200 parts by weight of said hydrazone compound for 100 parts by weight of the ...

... [*4] compounds, and pyrrolopyrrole compounds.

[*5] 5. The photosensitive material according to claim 4, wherein the electric charge generating material is an azo compound.

[*6] 6. The photosensitive material according to claim 1, wherein the photosensitive layer is a single-layer type photosensitive layer comprised of an electric charge transferring material, an electric charge generating material and a binding resin.

[*7] 7. The photosensitive material according to claim 6, wherein the single-layer type photosensitive layer contains 40 to 200 parts by weight of said hydrazone compound for 100 parts by weight of the binding resin.

[*8] 8. The photosensitive material according to claim 7, wherein the single-layer type photosensitive layer contains, for 100 parts by weight of the binding resin, 2 to 20 parts by weight of one or more kinds of an electric charge generating material selected from selenium, selenium- ...

E 52

LEVEL 1 - 46 OF 225 PATENTS

5,256,508

PAG

Oct. 26, 1993

Hydrazone compound and photosensitive material using said compound

INVENTOR: Hanatani, Yasuyuki, Sakai, Japan
Iwasaki, Hiroaki, Hirakata, Japan

... [*1] halogen atom, an alkyl group, an alkoxy group or the following group: [See Original Patent for Chemical Structure Diagram]

[*2] 2. The photosensitive material according to claim 1, wherein the photosensitive layer is a multi-layer type photosensitive layer including an electric charge transferring layer which includes the hydrazone compound as the electric charge transferring material, and an electric charge generating layer, which layers are laminated mutually.

[*3] 3. The photosensitive material according to claim 2, wherein the electric charge transferring layer of the multi-layer type photosensitive layer further includes a binding resin, and the electric charge transferring layer contains 25 to 200 parts by weight of said hydrazone compound for 100 parts by weight of the ...

... [*4] compounds, and pyrrolopyrrole compounds.

[*5] 5. The photosensitive material according to claim 4, wherein the electric charge generating material is an azo compound.

[*6] 6. The photosensitive material according to claim 1, wherein the photosensitive layer is a single-layer type photosensitive layer comprised of an electric charge transferring material, an electric charge generating material and a binding resin.

[*7] 7. The photosensitive material according to claim 6, wherein the single-layer type photosensitive layer contains 40 to 200 parts by weight of said hydrazone compound for 100 parts by weight of the binding resin.

[*8] 8. The photosensitive material according to claim 7, wherein the single-layer type photosensitive layer contains, for 100 parts by weight of the binding resin, 2 to 20 parts by weight of one or more kinds of an electric charge generating material selected from selenium, selenium- ...
E 53

PAG

LEVEL 1 - 47 OF 225 PATENTS

5,254,423

<=2> GET 1st DRAWING SHEET OF 1

Oct. 19, 1993

Electrophotographic photosensitive member, and
electrophotographic apparatus, device unit and facsimile
machine having the photosensitive member

INVENTOR: Mayama, Shinya, Yamato, Japan
Fujimura, Naoto, Yokohama, Japan
Yoshihara, Toshiyuki, Inagi, Japan
Sakai, Kiyoshi, Hachioji, Japan
Anayama, Hideki, Yokohama, Japan
Ainoya, Hideyuki, Tokyo, Japan
Aoki, Katsumi, Yokohama, Japan

... [*21] 21. The electrophotographic photosensitive member according to
claim 19, wherein said charge generation layer is the surface layer.

[*22] 22. The electrophotographic photosensitive member according to claim
18, wherein said photosensitive layer is of a single layer type.

[*23] 23. The electrophotographic photosensitive member according to claim
1, wherein said surface layer is a surface protective layer.

[*24] 24. The electrophotographic photosensitive member according to claim
1, wherein said electrophotographic photosensitive member has ...
GE 54

LEVEL 1 - 48 OF 225 PATENTS

5,247,445

<=2> GET 1st DRAWING SHEET OF 5

Sep. 21, 1993

Control unit of an internal combustion engine control unit
utilizing a neural network to reduce deviations between
exhaust gas constituents and predetermined values

INVENTOR: Miyano, Hideyo, Niza, Japan
Suzaki, Yukihiko, Nerima, Japan
Takahashi, Fumitaka, Hoya, Japan
Ogasawara, Ken-ichi, Fujimi, Japan

... [*7] units as the number of cylinders, and an intermediate layer
arranged between said input layer and said output layer; and wherein the units
are coupled with predetermined coupling weights only across the layers to form a
three-layer type perceptron neural network.

[*8] 8. A control unit for an internal combustion engine according to claim
7 wherein said control means corrects said coupling weights among the units by
applying a back propagation learning method to said three-layer type perceptron
neural network, and corrects the correction coefficient for said calculation
means.

[*9] 9. A control unit for an internal combustion engine according to claim 7 wherein said control means corrects ...

... [*22] units as the number of cylinders, and an intermediate layer arranged between said input layer and said output layer; and wherein the units are coupled with predetermined coupling weights only across the layers to form a three-layer type perceptron neural network.

[*23] 23. A control unit for an internal combustion engine according to claim 22 wherein said control means corrects said coupling weights among the units by applying a back propagation learning method to said three-layer type perceptron neural network, and corrects the correction coefficient for said calculation means.

[*24] 24. A control unit for an internal combustion engine according to claim 22 wherein said control means corrects ...
LEVEL 1 - 49 OF 225 PATENTS

5,244,561

<=2> GET 1st DRAWING SHEET OF 3

Sep. 14, 1993

Process and apparatus for the electrochemical determination
of pCO₂ in blood

INVENTOR: Calzi, Claudio, Milan, Italy
Tancredi, Gabrio, Milan, Italy

... [*3] 3. The process of claim 1, wherein the measurement liquid is high-purity water.

[*4] 4. The process of claim 1, wherein the measuring cell is a conductivity cell.

[*5] 5. The process of claim 4, wherein the conductivity cell is of the thin layer type.

[*6] 6. The process of claim 1, wherein the means of removing ionic impurities are ion exchangers.

[*7] 7. The process of 6, wherein the ion exchangers are in mixed bed form.

[*8] 8. The process of claim 7, wherein the ion exchangers ...

... [*12] 12. The apparatus of claim 10, wherein the measurement liquid is high-purity water.

[*13] 13. The apparatus of claim 10, wherein the measuring cell is a conductivity cell.

[*14] 14. The apparatus of claim 13, wherein the conductivity cell is of the thin layer type.

[*15] 15. The apparatus as claimed in claim 10, wherein the means for removing ionic impurities are ion exchangers.

[*16] 16. The apparatus of claim 10, wherein the ion exchangers are in mixed bed form.

[*17] 17. The ... PAGE 56

LEVEL 1 - 50 OF 225 PATENTS

5,242,839

<=> GET 1st DRAWING SHEET OF 6

Sep. 7, 1993

Method of manufacturing an integrated photoelectric receiving device

INVENTOR: Oh, Kwang-Ryong, Daejeon, Republic of Korea
Lee, Yong-Tak, Daejeon, Republic of Korea

... [*1] layer, an etching stopper layer and an absorption layer on the substrate etched;

c) removing the absorption layer excluding the photodetector forming area on the substrate by the selective etchant;

d) sequentially removing the etching stopper layer and the type n-channel layer between the photodetector and the transistor forming areas to electrically insulate the photodetector and the transistor;

e) sequentially forming a p-type InP layer and a p-type InGaAs layer on the ... PAGE 57

LEVEL 1 - 51 OF 225 PATENTS

5,240,964

<=> GET 1st DRAWING SHEET OF 1

Aug. 31, 1993

Process for producing urethane foam with high density skin

INVENTOR: Ohmura, Hirokazu, Niiza, Japan
Yoshimura, Kimio, Urawa, Japan
Narumi, Satoshi, Tochigi, Japan

What is claimed is:

[*1] 1. A process for producing a urethane foam having a high density outer surface layer, of the type wherein a plastic liquid containing di or polyisocyanates, polyols, a catalyst, low-molecular polyols used as a crosslinker or a chain extender, a blowing agent consisting of water, and an assistant is ...

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LEVEL 1 - 52 OF 225 PATENTS

5,236,755

<=2> GET 1st DRAWING SHEET OF 1

Aug. 17, 1993

Optical recording elements

INVENTOR: Howe, Steven D., Suffolk, England
Dorey, Lynn Y., Essex, England

... [*5] element as claimed in claims 1, 2, 3, or 4 in which the element is in the form of a tape.

[*6] 6. An element as claimed in any one of claims 1 to 4, wherein the absorbing layer is of the type which is thermally deformed to form optically readable pits when subject to heating by laser radiation of said given wavelength.

[*7] 7. An optical recording element as claimed in any one of claims 1 to 4, ...

PAGE 59

LEVEL 1 - 53 OF 225 PATENTS

5,214,664

<=2> GET 1st DRAWING SHEET OF 15

May 25, 1993

Multiple wavelength semiconductor laser

INVENTOR: Paoli, Thomas L., Los Altos, California

... [*4] emitting multiple wavelength solid state laser, comprising:
a plurality of contiguous layers of semiconductor material deposited on a substrate, one of said layers comprising a multiple quantum well active layer of the type wherein at least two quantum wells contained therein are formed such that one quantum level of a first quantum well is at the same energy level as a different quantum level of the second quantum well;

resonant ...

... [*18] multiple wavelength solid state laser, comprising:

a substrate;

a first cladding layer disposed on said substrate;

a multiple quantum well active layer disposed on said first cladding layer of the type having at least two adjacent quantum wells, a first of said quantum wells having a first energy bandgap between the lowest energy level of its conduction band and the uppermost level of its valence band and a ...

... [*23] multiple wavelength solid state laser, comprising:

a substrate;

a first cladding layer disposed on said substrate;

a multiple quantum well active layer disposed on said first cladding layer of the type having at least two adjacent quantum wells, a first of said quantum wells having a first thickness and a second of said quantum wells having a second thickness which is greater than said first thickness, ...

E 60

LEVEL 1 - 54 OF 225 PATENTS

5,213,926

May 25, 1993

Phenylenediamine derivative and photosensitive material
using said derivative

INVENTOR: Hanatani, Yasuyuki, Sakai, Japan
Iwasaki, Hiroaki, Hirakata, Japan

... [*2] material containing a conductive substrate having thereon a photosensitive layer which contains the phenylenediamine derivative (1) according to claim 1.

[*3] 3. The photosensitive material according to claim 2, wherein the photosensitive layer is a multi-layer type photosensitive layer comprising an electric charge transferring layer on an electric charge generating layer which are laminated mutually.

[*4] 4. The multi-layer type photosensitive material according to claim 3, wherein the electric charge transferring layer contains 25 to 200 parts by weight of said phenylenediamine derivative (1) for 100 parts by weight of a ...

... [*5] compounds, and pyrrolopyrrole compounds.

[*6] 6. The photosensitive material according to claim 5, wherein the electric charge generating material is an azo compound.

[*7] 7. The photosensitive material according to claim 2, wherein the photosensitive layer is a single-layer type photosensitive layer comprised of an

electric charge transferring material, an electric charge generating material and a binding resin.

[*8] 8. The photosensitive material according to claim 7, wherein the single-layer type photosensitive layer contains 40 to 200 parts by weight of said phenylenediamine derivative (1) for 100 parts by weight of a binding resin.

[*9] 9. The photosensitive material according to claim 8, wherein the single-layer type photosensitive layer contains, for 100 parts by weight of a binding resin, 2 to 20 parts by weight of one or more kinds of an electric charge generating material selected from the group ...
LEVEL 1 - 55 OF 225 PATENTS

5,200,969

<=2> GET 1st DRAWING SHEET OF 15

Apr. 6, 1993

Switchable multiple wavelength semiconductor laser

INVENTOR: Paoli, Thomas L., Los Altos, California

... [*1] two different output wavelengths, comprising:

a laser body of the type including a plurality of contiguous layers of semiconductor material, located in an optical path, at least first and second portions of said layers of the type providing carrier quantization in at least one dimension, wherein said first and second portions are formed such that one quantum level of said first portion is at the same energy level as a different quantum ...

... [*2] different output wavelengths, comprising:

a laser body of the type including a plurality of contiguous layers of semiconductor material, located in an optical path, at least a first and second portions of said layers of the type providing carrier quantization in at least one dimension, wherein said first and second portions thereof are formed such that one quantum level of said first portion is at the same energy level as a different quantum ...

LEVEL 1 - 56 OF 225 PATENTS

5,196,143

Mar. 23, 1993

Mixed metal hydroxide-clay adducts as thickeners for water
and other hydrophylic fluids

INVENTOR: Burba, III, John L., Angleton, Texas
Barnes, Audrey L., Lake Jackson, Texas

... [*13] saconite, sepiolite, vermiculite, attapulgite, and Fuller's earth.

[*14] 14. The adduct or reaction product of claim 1 wherein the mineral clay is at least one of the classes consisting of amorphous clays of the allophane group and crystalline clays of the 2-layer type, 3-layer type, expanding type, non-expanding type, elongate, regular mixed layer type, and chain structure type.

[*15] 15. The adduct or reaction product of claim 1 wherein the mineral clay is bentonite.

[*16] 16. The adduct or reaction product of claim 1 wherein the mineral clay is beneficiated bentonite.

[*17] 17. The adduct or reaction ...
LEVEL 1 - 57 OF 225 PATENTS

5,189,567

<=2> GET 1st DRAWING SHEET OF 3

Feb. 23, 1993

High speed switching circuit for controlling current flow in
a bridge circuit coil for use in a magneto-optic direct
overwrite system

INVENTOR: Mody, Hemant K., Rochester, New York

What is claimed is:

[*1] 1. A direct over-write magneto-optic recording apparatus for recording digital information in a magnetic recording layer of the type having vertically oriented magnetic domains, said digital information identified by a digital information source, said apparatus comprising:

(a) means for scan-irradiating the recording layer with a beam of ...

... [*3] by claim 2, wherein said switching elements are comprises of triacs.

[*4] 4. A direct over-write magneto-optic recording apparatus for recording digital information in a magnetic recording layer of the type having vertically oriented magnetic domains, wherein an information data source provides control signals identifying data to be stored by said recording apparatus, said apparatus comprising:

(a) means for scan- ...

... [*6] alternates directions during each cycle of said predetermined frequency.

[*7] 7. A direct over-write magneto-optic recording apparatus for recording digital information in a magnetic recording layer of the type having magnetic domains with a plurality of vertical orientations, wherein said digital information to be recorded is represented by control signals determining a representation of said digital information by said recording layer, ...

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LEVEL 1 - 58 OF 225 PATENTS

5,189,500

<=2> GET 1st DRAWING SHEET OF 24

Feb. 23, 1993

Multi-layer type semiconductor device with semiconductor element layers stacked in opposite directions and manufacturing method thereof

INVENTOR: Kusunoki, Shigeru, Hyogo, Japan

What is claimed is:

[*1] 1. A multi-layer type semiconductor device comprising;
a transparent substrate,

a photosensor layer formed on said transparent substrate and including photosensor elements for detecting light passing through said transparent substrate and converting the ...

... [*1] photosensor elements of said photosensor layer and electrically connected to said circuit layer via said through holes for displaying results of processing output from said circuit layer.

[*2] 2. A multi-layer type semiconductor device according to claim 1, further comprising a light shielding layer interposed between said photosensor layer and said circuit layer for preventing light traveling through said photosensor layer toward said circuit layer from entering said circuit layer.

[*3] 3. A multi-layer type semiconductor device according to claim 1, which is formed of materials penetrable to light as a single chip.

[*4] 4. A multi-layer type semiconductor device according to claim 3, which, formed as the single chip, has a light transmittance of at least 5%.

[*5] 5. A multi-layer type semiconductor device according to claim 1, wherein said display element layer includes transmission type liquid crystal display elements for giving a display based on variations of light passing therethrough, ...

... [*5] layer formed between said display element layer and said circuit layer and including light emitting elements for projecting light to said liquid crystal display elements.

[*6] 6. A multi-layer type semiconductor device according to claim 5, further comprising a light shielding layer interposed between said light emitting element layer and said circuit layer for preventing light traveling from said light emitting element layer toward said circuit layer from entering said circuit layer.

[*7] 7. A multi-layer type semiconductor device according to claim 1, wherein said display element layer includes reflection type liquid crystal display elements for giving a display based on variations of reflected light.

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Pat. No. 5189500, *7

[*8] 8. A multi-layer type semiconductor device according to claim 1, wherein said display element layer includes light emitting elements for giving a display based on self-emission of light.

[*9] 9. A multi-layer type semiconductor device according to claim 8, further comprising a light shielding layer interposed between said display element layer and said circuit layer for preventing light traveling from said display element layer toward said circuit layer from entering said circuit layer.

[*10] 10. A multi-layer type semiconductor device comprising;

a transparent substrate,

a display element layer including display elements and formed on said transparent substrate such that a display given by said display elements is visible ...

... [*10] connected to said circuit layer via said through holes for converting an amount of information received from outside into an electric signal for processing by said circuit layer.

[*11] 11. A multi-layer type semiconductor device according to claim 10, wherein said sensor layer includes a photosensor element for detecting light.

[*12] 12. A multi-layer type semiconductor device according to claim 10, wherein said sensor layer includes a temperature sensing element for detecting temperature.

[*13] 13. A multi-layer type semiconductor device according to claim 10, wherein said sensor layer includes a pressure sensing element for detecting pressure.

[*14] 14. A multi-layer type semiconductor device according to claim 10, wherein said sensor layer includes a sensing element for detecting radiation.

[*15] 15. A multi-layer type semiconductor device comprising;

a substrate defining perforations and having conductors formed in said perforations,

a first circuit layer formed on said substrate and including an electric circuit electrically connected to said ...

LEVEL 1 - 59 OF 225 PATENTS

PAGE 66

5,189,297

<=2> GET 1st DRAWING SHEET OF 2

Feb. 23, 1993

Planar double-layer heterojunction HgCdTe photodiodes and methods for fabricating same

INVENTOR: Ahlgren, William L., Goleta, California

... [*19] atoms selected for type-converting the underlying collector layer to an opposite type of electrical conductivity;

illuminating the dopant layer and the underlying surface of the collector layer with the source; and

diffusing the dopant layer into the underlying collector layer thereby type-converting the underlying collector layer to an opposite type of conductivity.

[*20] 20. A method as defined in claim 13 wherein the step of forming a base layer is accomplished by forming an n-type ...

... [*21] depositing the liberated dopant atoms over the surface of the collector layer, the dopant atoms being deposited upon the surface only where a photodiode is not desired; and

diffusing the deposited dopant atoms into the underlying collector layer thereby type-converting the underlying collector layer to an n-type of conductivity.

[*22] 22. A method as defined in claim 13 and further comprising a step of depositing a passivation layer at least over the ...

LEVEL 1 - 60 OF 225 PATENTS

PAGE 67

5,187,680

<=2> GET 1st DRAWING SHEET OF 15

Feb. 16, 1993

Neural net using capacitive structures connecting input lines and differentially sensed output line pairs

INVENTOR: Engeler, William E., Scotia, New York

... [*11] lines that are identified by the same ordinal number connected to be receptive of the same input signal, thereby to provide a neural network layer.

[*12] 12. A plurality, L in number, of neural net layers of the type set forth in claim 11, respectively identified by consecutive ordinal numbers zeroeth through (L - 1)<th>, L being a positive integer, the non-linear amplifiers of the processors ...

... [*18] lines that are identified by the same ordinal number connected to be receptive of the same input signal, thereby to provide a neural network layer.

[*19] 19. A plurality, L in number, of neural net layers of the type set forth in claim 18, respectively identified by consecutive ordinal numbers zeroeth through (L - 1)<th>, L being a positive integer, the non-linear amplifiers of the processors ...

... [*27] lines that are identified by the same ordinal number connected to be receptive of the same input signal, thereby to provide a neural network layer.

[*28] 28. A plurality, L in number, of neural net layers of the type set forth in claim 27, respectively identified by consecutive ordinal numbers zeroeth through (L - 1)<th>, L being a positive integer, the non-linear amplifiers of the processors ...

LEVEL 1 - 61 OF 225 PATENTS

5,185,228

Feb. 9, 1993

PAGE 68

Electrophotosensitive material containing p-benzylbiphenyl

INVENTOR: Maeda, Tatsuo, Kobe, Japan
Katsukawa, Masato, Ibaraki, Japan
Iwasaki, Hiroaki, Hirakata, Japan
Mizuta, Yasufumi, Kishiwada, Japan

... [*3] benzylbiphenyl is included in an amount of 20 to 150 parts by weight for 100 parts by weight of m-phenylenediamine.

[*4] 4. An electrophotosensitive material according to claim 2, wherein the layer is a single-layer type photosensitive layer containing a charge generating material.

[*5] 5. An electrophotosensitive material according to claim 4, wherein the charge generating material is a perylene compound.

[*6] 6. An electrophotosensitive material according to claim 2, wherein the

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Received: by prod.lexis-nexis.com id AA26467
(InterLock SMTP Gateway 3.0 for dmorris@watson.ibm.com);
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Subject: LEXIS(R)/NEXIS(R) Print Request Job 68990, 2 of 4

...

... [*7] contained in an amount of 20 to 150 parts by weight for 100 parts by weight of charge transfer material.

[*8] 8. An electrophotosensitive material according to claim 1, wherein the layer is a single-layer type photosensitive layer containing a charge generating material.

[*9] 9. An electrophotosensitive material according to claim 8, wherein the charge generating material is a perylene compound.

[*10] 10. An electrophotosensitive material according to claim 1, wherein the ... PAGE 69

LEVEL 1 - 62 OF 225 PATENTS

5,179,457

<=2> GET 1st DRAWING SHEET OF 7

Jan. 12, 1993

Liquid crystal display device with birefringent film between the substrates of the liquid crystal

INVENTOR: Hirataka, Jun-ichi, Hitachi, Japan
Kondo, Katsumi, Katsuta, Japan
Tomioka, Yasushi, Hatoyama, Japan
Imazeki, Shuji, Hatoyama, Japan
Taniguchi, Yoshio, Hino, Japan

... [*9] pair of electrode structures,
a liquid crystal layer sandwiched between said pair of substrates and electrode structures, and

an optical birefringent device disposed between said pair of substrates including a solid layer type structure substantially transparent to a light employed wherein a pattern is formed in said structure by two areas, each area having a different birefringent property and said pattern is arranged within the

PAGE 70

LEVEL 1 - 63 OF 225 PATENTS

5,169,754

Dec. 8, 1992

Biodegradable particle coatings having a protein covalently immobilized by means of a crosslinking agent and processes for making same

INVENTOR: Siiman, Olavi, Davie, Florida
Burshteyn, Alexander, Miami Lakes, Florida
Gupta, Ravinder K., Pembroke Pines, Florida

... [*1] particles in which each particle comprises a solid core coated with two layers of water soluble gelatin having a plurality of pendant functional groups, said gelatin layers comprising a first layer of type B, alkali cured gelatin of Bloom in the range 60 to 225 and a second layer of type A, acid cured gelatin of Bloom in the range 60 to 300, and said layers on the individual particles being crosslinked by the action of a chemical crosslinking agent such that aid particles can be ...

... [*27] colloidal sized solid core material;

(b) a gelatin coating adsorbed onto the surface of said solid core and crosslinked thereon by a chemical crosslinking agent, said gelatin coating comprising first layer of type B, alkali cured gelatin of Bloom in the range 60 to 225 and a second layer of type A, acid cured gelatin of Bloom in the range of 60 to 300;

(c) an antibody; and

(d) a bridging group having an end covalently bonded to said crosslinked gelatin surface and another end covalently ...

... [*43] a) contacting a solution containing a biological substance with an antibody covalently bound to the surface of a crosslinked gelatin coated solid core particle wherein said gelatin coating comprises a first layer of type B, alkali cured gelatin of Bloom in the range 60-225 and a second layer of type A, acid cured gelatin of Bloom in the range of 60-300;

(b) incubating the mixture of step (a) for a time and at a temperature sufficient to insure the formation of a complex between ...

LEVEL 1 - 64 OF 225 PATENTS

Nov. 10, 1992

Display device with coordinate input function

INVENTOR: Yoshioka, Kazuo, Nagasaki, Japan

... [*1] for both displaying images and inputting coordinates, comprising:
a sensor means for sensing coordinate input detection signals from a control means;

a liquid crystal display panel of two-layer type including an optical phase liquid crystal compensation cell as a first layer of the liquid crystal display panel and a liquid crystal display cell as a second layer of the liquid ...

... [*1] signals to said sensor means.

[*2] 2. A display device with coordinate input function as set forth in claim 1, wherein an image display screen of the liquid crystal display panel of two-layer type is divided into plural areas to be separately driven.
PAGE 72

LEVEL 1 - 65 OF 225 PATENTS

Sep. 15, 1992

Semiconductor device having thin film wiring layer of aluminum containing carbon

INVENTOR: Kato, Takashi, Sagamihara, Japan
Ito, Takashi, Kawasaki, Japan
Maeda, Mamoru, Tama, Japan

... [*8] carbon greater than an atomic percent of carbon contained in said third layer.

[*9] 9. A semiconductor device as claimed in claim 5 in which a plurality of pairs of said third layer type and said fourth layer type are provided on said fourth layer in alternate succession so that each third layer type is sandwiched between two fourth layer types.

[*10] 10. A semiconductor device as claimed in claim 1, in which grains of said second layer are generally oriented on a (200) plane.

5,146,542

<=2> GET 1st DRAWING SHEET OF 12

Sep. 8, 1992

Neural net using capacitive structures connecting output
lines and differentially driven input line pairs

INVENTOR: Engeler, William E., Scotia, New York

... [*14] said training period of time for generating an error signal
identified by the same ordinal number as said processor generating it.

[*15] 15. A plurality, L in number, of neural net layers of the type set
forth in claim 14, respectively identified by consecutive ordinal numbers
zeroeth through (L - 1)<th>, L being a positive integer, the output ports of
the processors in ...

... [*26] input lines and the one of said (M + 1)<th> and 2M<th> input
lines identified by ordinal number M higher.

[*27] 27. A plurality, L in number, of neural net layers of the type set
forth in claim 25, respectively identified by consecutive ordinal numbers
zeroeth through (L - 1)<th>, L being a positive integer, the non-linear
amplifiers of the processors ...

... [*31] lines that are identified by the same ordinal number connected to
be receptive of the same input signal, thereby to provide a neural network
layer.

[*32] 32. A plurality, L in number, of neural net layers of the type set
forth in claim 31, respectively identified by consecutive ordinal numbers
zeroeth through (L - 1)<th>, L being a positive integer, the non-linear
amplifiers of the processors ...

... [*33] said training period of time for generating an error signal
identified by the same ordinal number as said processor generating it.

[*34] 34. A plurality, L in number, of neural net layers of the type set
forth in claim 33, respectively identified by consecutive ordinal numbers
zeroeth through (L - 1)<th>, L being a positive integer, the output ports of
the processors in ...

LEVEL 1 - 67 OF 225 PATENTS

5,141,684

<=2> GET 1st DRAWING SHEET OF 2

Aug. 25, 1992

Method of preparing urethane foam articles

INVENTOR: Yoshimura, Kimio, Urawa, Japan
Narumi, Satoshi, Tokyo, Japan

What is claimed is:

[*1] 1. A method of preparing a urethane foam article having a high density outer surface layer, of the type wherein a plastic liquid containing isocyanates, polyols, a catalyst, a blowing agent, an assistant and other additives is poured into a mold through a one-shot molding process while maintaining the ...

... [*4] 1-substituted imidazole compound,
1,8-diazabicyclo(5,4,0)-7-undecene and an organic acid salt thereof.

[*5] 5. A method of preparing a urethane foam article having a high density outer surface layer, of the type wherein a plastic liquid containing isocyanates, polyols, a catalyst, a blowing agent, an assistant and other additives is poured into a mold through a one-shot molding process while maintaining the ...

PAGE 75

LEVEL 1 - 68 OF 225 PATENTS

5,132,132

<=2> GET 1st DRAWING SHEET OF 3

Jul. 21, 1992

Coating method for magnetic recording medium

INVENTOR: Watanabe, Masaru, Nishinomiya, Japan
Hirose, Satoshi, Amagasaki, Japan

... [*1] as to form a lower layer on said support continuously travelling and then coating on said lower layer a second magnetic coating solution so as to form an upper layer thereon to thereby produce a two-layer type magnetic recording medium, said method comprising the steps of coating said first magnetic coating solution on said support by a first die including first and second lip portions which are in ...

PAGE 76

LEVEL 1 - 69 OF 225 PATENTS

5,128,229

<=2> GET 1st DRAWING SHEET OF 2

Jul. 7, 1992

Electrophotosensitive material and method of manufacturing
the same

INVENTOR: Katsukawa, Masato, Ibaraki, Japan
Kimoto, Keizo, Hirakata, Japan
Tsujita, Mitsuji, Osaka, Japan
Miura, Satoru, Shijonawate, Japan

We claim:

[*1] 1. An electrophotosensitive material having a single-layer type photosensitive layer formed on the surface of a conductive substrate, wherein the photosensitive layer includes a charge generating material a polycarbonate resin as a binding resin, said polycarbonate resin being ...

... [*2] according to claim 1, wherein the photosensitive layer includes a perylene compound as the charge generating material..

[*3] 3. A method of manufacturing an electrophotosensitive material, said electrophotosensitive material being a single-layer type photosensitive layer formed on the surface of a conductive substrate, wherein the photosensitive layer a charge generating material includes a polycarbonate resin as a binding resin, said polycarbonate resin being ...

... [*5] compound represented by formula (II) is included in an amount of 40 to 200 parts by weight per 100 parts by weight of the polycarbonate resin.

[*6] 6. An electrophotosensitive material having a single-layer type photosensitive layer formed on the surface of a conductive substrate, wherein the photosensitive layer includes a charge generating material a polycarbonate resin represented by the following formula (I): [See Original Patent ...

... [*6] said photosensitive layer being not greater than 2.5×10^{-3} > μ 1/mg.

[*7] 7. A method of manufacturing an electrophotosensitive material, said electrophotosensitive material being a single-layer type photosensitive layer formed on the surface of a conductive substrate, wherein the photosensitive layer a charge generating material includes a polycarbonate resin represented by the following formula (I): [See Original Patent ...
LEVEL 1 - 70 OF 225 PATENTS

5,126,210

<=2> GET 1st DRAWING SHEET OF 2

Jun. 30, 1992

Anodic phosphonic/phosphinic acid duplex coating on valve
metal surface

INVENTOR: Wieserman, Larry F., Apollo, Pennsylvania
Wefers, Karl, Apollo, Pennsylvania

Gary A., Natrona, Pennsylvania
Edward S., New Kensington, Pennsylvania

11] copper, manganese, molybdenum, chromium, nickel, zinc, vanadium,
boron, lithium and zirconium; and

duplex layer comprised of:

intermediate layer consisting essentially of a non-porous barrier
e valve metal oxide attached to said base layer; and

n acid resistant, functionalized layer of a monomeric
s-containing compound chemically bonded to a surface of said oxide
e functionalized ...

9] 9. A layered material comprised of:

base layer of aluminum alloy; and

duplex layer comprised of:

intermediate layer consisting essentially of a non-porous barrier
e aluminum oxide attached to said base layer; and

n acid resistant, functionalized layer of an organic monomeric
s-containing compound chemically bonded to a surface of said oxide

10. The layered ...

31] A layered material comprised of:

base layer of aluminum or aluminum alloy; and

duplex layer comprised of:

intermediate layer consisting essentially of a non-porous barrier
e aluminum oxide attached to said base layer having a density of 2.8 to
c, being greater than 95 wt. % aluminum oxide, having a thickness in
of 100 to 5000Angstrom and ...

LEVEL 1 - 71 OF 225 PATENTS

5,116,692

<=2> GET 1st DRAWING SHEET OF 2

May 26, 1992

Multi-layer type sliding bearing of aluminum alloy and
method of producing the same

Nitowski,
Martin, f

... [*
titanium,

(b) a

(i) an
layer typ

(ii) a
phosphor
layer, th

... [*

(a) a

(b) a

(i) an
layer typ

(ii) a
phosphor
layer.

[*10]

... [*

(a) a

(b) a

(i) an
layer typ
3.2 gms/c
the range

INVENTOR: Mori, Sanae, Nagoya, Japan
Sakamoto, Masaaki, Nagoya, Japan
Ishikawa, Hideo, Komaki, Japan
Nagai, Yoji, Nagoya, Japan

What is claimed is:

[*1] 1. In a multi-layer type sliding bearing of aluminum alloy, having a backing layer of steel, a bearing layer of aluminum alloy bonded to the backing layer, and an overlay layer, the improvement further comprising a mixture layer of a ...

... [*1] layer and one element selected from the group consisting of Ni, Co and Fe, said overlay consisting by weight of 0 to 15% Cu, 0 to 20% Sb, and the balance- Sn and incidental impurities.

[*2] 2. A multi-layer type sliding bearing of aluminum alloy, having a backing layer of steel provided on one side thereof with a rear face-plating layer provided on rear face thereof, a bearing layer of aluminum alloy bonded to ...

... [*2] overlay and one element selected from the group consisting of Ni, Co and Fe, said overlay consisting by weight of 0 to 15% Cu, 0 to 20% Sb, and the balance Sn and incidental impurities.

[*3] 3. A multi-layer type sliding bearing of aluminum alloy as claimed in claim 2, wherein the rear face-plating layer consists of the same constituents as the overlay, the thickness of the rear face-plating layer being in a range of 0.1 to 5 microns.

[*4] 4. In a method of producing a multi-layer type sliding bearing of aluminum alloy, comprising the steps of: providing a half cylindrical or cylindrical bearing member made of an aluminum alloy, said bearing member being bonded onto a backing layer of steel; and ...

... [*4] said mixture layer being constituted by a mixture of the constituents of said overlay and one element selected from the group consisting of Ni, Co and Fe.

[*5] 5. A method of producing a multi-layer type sliding bearing of aluminum alloy claimed in claim 4, wherein said step of electrolytically providing said overlay layer on said inner face of said bearing member further includes the step of electrolytically ...

LEVEL 1 - 72 OF 225 PATENTS

5,103,329

<=2> GET 1st DRAWING SHEET OF 8

Apr. 7, 1992

Surface stabilized ferroelectric liquid crystal switching
using proximity effects

INVENTOR: Clark, Noel A., Boulder, Colorado
Handschy, Mark, Boulder, Colorado

... [*14] third electrode means, said first and second domain wall forming
a data value.

[*15] 15. The apparatus as recited in claim 1, wherein said liquid crystal
film is a tilted layer type.

[*16] 16. An apparatus as in claim 1, wherein said electrode gap is spanned
by a resistive layer.

PAGE 80

LEVEL 1 - 73 OF 225 PATENTS

5,087,544

Feb. 11, 1992

Perylene electrophotosensitive material with
m-phenylenediamine

INVENTOR: Muto, Nariaki, Daito, Japan
Kakui, Mikio, Mino, Japan
Sumida, Keisuke, Hirakata, Japan
Nakazawa, Toru, Osaka, Japan
Matsumoto, Kazuo, Hirakata, Japan

What is claimed is:

[*1] 1. An electrophotosensitive material comprising a conductive substrate
and a single layer type photosensitive layer provided on said conductive
substrate, said photosensitive layer containing a m-phenylenediamine compound as
charge-transferring material and a perylene compound as charge-generating
material, ...

PAGE 81

LEVEL 1 - 74 OF 225 PATENTS

5,081,513

<=2> GET 1st DRAWING SHEET OF 5

Jan. 14, 1992

Electronic device with recovery layer proximate to active
layer

INVENTOR: Jackson, Warren B., San Francisco, California
Hack, Michael, Mountain View, California

... [*9] dopant concentration of each of said dopant types in said recovery
layer is capable of providing substantially the same number of carriers of said

opposite sign to said channel carriers as does a doped layer of that type having a concentration in the range of 1.5×10^{18} > to 4.5×10^{18} > atoms per cm^3 > .

[*10] 10. An electronic device including a substantially intrinsic non-single ...

PAGE 82

LEVEL 1 - 75 OF 225 PATENTS

5,059,502

<=2> GET 1st DRAWING SHEET OF 3

Oct. 22, 1991

Electrophotographic photoconductor

INVENTOR: Kojima, Narihito, Numazu, Japan
Nagame, Hiroshi, Numazu, Japan
Seto, Mitsuru, Yamakita, Japan
Yamazaki, Shunpei, Atsugi, Japan
Hayashi, Shigenori, Atsugi, Japan
Ishida, Noriya, Atsugi, Japan
Hirose, Naoki, Atsugi, Japan
Sasaki, Mari, Atsugi, Japan
Takeyama, Junichi, Atsugi, Japan

... [*16] 1. wherein the Vickers hardness of said organic photoconductive layer is 10 to 50 Kg/mm^2 > .

[*17] 17. The electrophotographic photoconductor as claimed in claim 1, wherein organic photoconductive layer is a single-layer-type photoconductive layer.

[*18] 18. The electrophotographic photoconductor as claimed in claim 17, wherein the thickness of said single-layer-type photoconductive layer is 5 to $30 \mu\text{m}$.

[*19] 19. The electrophotographic photoconductor as claimed in claim 1, wherein organic photoconductive layer is a function-separated-type photoconductive layer comprising a ...

LEVEL 1 - 76 OF 225 PATENTS

5,054,134

<=2> GET 1st DRAWING SHEET OF 5

Oct. 8, 1991

Upper layer water flow type circulating water pool

INVENTOR: Teratsuji, Osamu, Ichikawa, Japan
Nishimura, Keiichi, Urawa, Japan

PAGE 83

Moriya, Yoshiro, Matsudo, Japan
Ueda, Yukihiko, Yokohama, Japan

What is claimed is:

[*1] 1. An upper water flow layer type circulating water pool comprising a circulating pool main body with front and rear curved portions; a swimming tank or pool defined by an opening in an upper portion of said circulating ...

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LEVEL 1 - 77 OF 225 PATENTS

5,051,126

<=2> GET 1st DRAWING SHEET OF 1

Sep. 24, 1991

Cermet for tool

INVENTOR: Yasui, Hajime, Nagoya, Japan
Suzuki, Junichiro, Hashima, Japan

... [*1] layer is composed of more transitional metals selected from the group consisting of the group IVb metals than the core, and the core is composed of more transitional metals selected from the group consisting of the group Vb metals and tungsten than any outer layer of the Type-II particles.

[*2] 2. The cermet of claim 1, wherein the ratio of transitional metals in group IVb, transitional metals in group Vb, and tungsten to carbon and nitrogen is 1.0:0.85-1.0.

[*3] 3. The cermet of claim ...

LEVEL 1 - 78 OF 225 PATENTS

5,050,323

<=2> GET 1st DRAWING SHEET OF 2

Sep. 24, 1991

Badge

INVENTOR: Gagnon, Raymond, Montreal, Canada

... [*1] front face of said body layer, and

fastening means carried by the back face of said body layer to attach said body layer to a wearer's clothing; wherein:

the foam material forming the body layer is of the type having no memory when compressed;

said foam material is left exposed at the peripheral edge of said body layer; and,

said badge further comprises a protecting transparent film covering said image-bearing ...

... [*9] front face of said body layer; and,

fastening means carried by the back face of said body layer to attach said body layer to a wearer's clothing; wherein:

the expanded polystyrene forming the body layer is of the type having no memory when compressed;

said expanded polystyrene is left exposed at the peripheral edge of said body layer; and,

said badge further comprises a protecting transparent film covering said image-bearing ...

... [*10] front face of said body layer; and,

fastening means carried by the back face of said body layer to attach said body layer to a wearer's clothing, wherein;

the expanded polystyrene forming the body layer is of the type having no memory when compressed;

said expanded polystyrene is left exposed at the peripheral edge of said body layer; and,

said badge further comprises a protecting transparent film covering said image-bearing ...

LEVEL 1 - 79 OF 225 PATENTS

5,039,627

<=2> GET 1st DRAWING SHEET OF 7

Aug. 13, 1991

Method of producing a quasi-flat semiconductor device
capable of a multi-wavelength laser effect and the
corresponding device

INVENTOR: Menigaux, Louis, Bures sur Yvette, France
Dugrand, Louis, Chelles, France

... [*4] least one material selected from the group consisting of aluminum, gallium and indium and at least one material selected from the group consisting of phosphorous, arsenic and antimony.

[*5] 5. A method according to claim 4, wherein the active layers are of type N, and comprise Ga 1 - x Al x As, x differing each time, and being less than approximately 10%, while the confining layers comprise Ga 1 - y Al y ...

... [*9] about one-tenth of a micron.

[*10] 10. A method according to claim 1, wherein the upper layer is a group III-V alloy.

[*11] 11. A method according to claim 5, wherein the upper layer is type P gallium arsenide.

[*12] 12. A method according to claim 1, wherein said levelling comprises an erosion operation applied to the upper surface of the block, laying bare at least over the major part of the eroded ...

... [*30] least one material selected from the group consisting of aluminum, gallium and indium and at least one material selected from the group consisting of phosphorous, arsenic and antimony.

[*31] 31. A method according to claim 30, wherein the active layers are of type N, and comprises Ga 1 - x Al x As, x differing each time and being less than approximately 10%, while the confinement layers comprise Ga 1 - y Al y ...

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LEVEL 1 - 80 OF 225 PATENTS

5,037,505

<=2> GET 1st DRAWING SHEET OF 2

Aug. 6, 1991

Construction process for a self-aligned transistor

INVENTOR: Tung, Pham N., Paris, France

... [*2] mask,

i) dissolving the two silica masks in a solution of HF + NH4F + H2O.

[*3] 3. Process of constructing a self-aligned transistor, according to claim 1, from a substrate comprising layers of type N and N< + > formed by epitaxy, further comprising the steps of:

a) depositing and masking by a first resin mask creating a resin pattern of dimensions corresponding to the power of resolution of said ...

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LEVEL 1 - 81 OF 225 PATENTS

5,031,025

<=2> GET 1st DRAWING SHEET OF 3

Jul. 9, 1991

Hermetic single chip integrated circuit package

INVENTOR: Braun, Robert E., Norristown, Pennsylvania
Gibbs, Ronald T., King of Prussia, Pennsylvania

... [*1] said rim of said lid being sealed to said substrate, thereby forming an hermetic package.

[*2] 2. An hermetic integrated circuit package as defined in claim 1 wherein said wiring substrate is of the multi-layer type, said lead terminals being coupled to said input/output terminals.

[*3] 3. An hermetic integrated circuit package as defined in claim 2 wherein said rim of said lid is comprised of a ...
LEVEL 1 - 82 OF 225 PATENTS

5,028,786

<=2> GET 1st DRAWING SHEET OF 4

Jul. 2, 1991

Array for a nuclear radiation and particle detector

INVENTOR: Da Silva, Angela J., Vancouver, Canada
Le Gros, Mark A., Vancouver, Canada
Turrell, Brian G., Vancouver, Canada
Kotlicki, Andrzej, Warsaw, Maryland, Poland
Drukier, Andrzej K., Greenbelt, Maryland

... [*13] detector as defined in claim 8 wherein said each array is a planar array.

[*14] 14. A method of making a detector array comprising depositing a substantially continuous film layer of type I superconducting material on a substrate removing a portion of said film to leave a plurality of discrete pixels each of a predetermined size of said type I superconducting material arranged ...

LEVEL 1 - 83 OF 225 PATENTS

5,028,505

Jul. 2, 1991

Electrophotographic photoreceptor

INVENTOR: Akasaki, Yutaka, Kanagawa, Japan
Nukada, Katsumi, Kanagawa, Japan
Sato, Katsuhiko, Kanagawa, Japan

... [*9] comprising a compound of formula (I), (II), or (III) as set forth in claim 1.

[*10] 10. The electrophotographic photoreceptor as claimed in claim 1, wherein the photosensitive layer is of a single layer type.

LEVEL 1 - 84 OF 225 PATENTS

5,024,913

Jun. 18, 1991

Electrophotographic photosensitive material

INVENTOR: Yoshida, Takeshi, Kawachinagano, Japan
Nakatani, Kaname, Osaka, Japan
Fukami, Toshiyuki, Sakai, Japan
Tanaka, Nariaki, Kishiwada, Japan

... [*6] photosensitive layer.

[*7] 7. The electrophotographic photosensitive material of claim 6, wherein the surface protective layer is 2 to 5 microns thick.

[*8] 8. The electrophotographic photosensitive material of claim 1, wherein the photosensitive layer is of a single layer type.

[*9] 9. The electrophotographic photosensitive material of claim 8, wherein the photosensitive layer is 10 to 50 microns thick.

[*10] 10. The electrophotographic photosensitive material of claim 8, wherein the photosensitive layer is 15 to 25 microns thick.

[*11] 11. The ...

LEVEL 1 - 85 OF 225 PATENTS

5,022,441

<=2> GET 1st DRAWING SHEET OF 67

Jun. 11, 1991

Papermaker's double layer fabric with high warp and weft
volume per repeat

INVENTOR: Tate, Takuo, Hachiouji, Japan
Watanabe, Taketoshi, Inagi, Japan
Nagura, Hiroyuki, Inagi, Japan

What is claimed is:

[*1] 1. A papermakers' double layer type fabric comprising in one repeat a warp layer, said warp layer having an upper surface and a lower surface, said warp layer consisting of $n \times 2$ of warps wherein n is an ...

... [*1] being each interlaced once in one repeat with a warp, wherein said lower surface polyamide wefts are of larger diameter than said lower surface polyester wefts.

[*2] 2. A papermakers' double layer type fabric comprising in one repeat a warp layer, said warp layer having an upper surface and a lower surface, said warp layer consisting of $n \times 2$ of warps wherein n is an ...

... [*2] between which said non-interlacing warp is located to form a knuckle so that the knuckles so formed on each of the adjacent lower surface wefts are arranged in a staggered relation.

[*3] 3. A papermakers' double layer type fabric according to claim 2, wherein a non-interlacing warp sandwiched in between a pair of warps interlacing with a lower surface polymeric weft, interlaces with an upper surface weft at a position where said pair of warps interlace with the lower surface polymeric weft.

[*4] 4. A papermakers' double layer type fabric according to claim 2, wherein in said $n \times 2$ of warps, a non-interlacing warp and a warp interlacing with a lower surface polymeric weft, are alternately arranged.

[*5] 5. A papermakers' double layer type fabric according to claim 2, wherein in said $n \times 2$ of warps, a non-interlacing warp and a plurality of warps interlacing with a lower surface polymeric weft, are alternately arranged.

[*6] 6. A papermakers' double layer type fabric according to claim 2, wherein said lower surface polyamide wefts are of larger diameter than said lower surface polyester wefts.

[*7] 7. A papermakers' double layer type fabric comprising in one repeat a warp layer, said warp layer having an upper surface and a lower surface, said warp layer consisting of $n \times 2$ of warps, wherein n is an ...

... [*7] each interlaced once in one repeat with a warp and the lower surface polyester wefts being each interlaced twice in one repeat with a warp.

PAGE 93

Pat. No. 5022441, *7

[*8] 8. A papermakers' double layer type fabric according to claim 7, wherein said lower surface polyamide wefts are of larger diameter than said lower surface polyester wefts.

[*9] 9. A papermakers' double layer type fabric according to claim 7, wherein the number of said lower surface polyamide wefts and that of said lower surface polyester wefts are in a ratio of from 1:3 to 3:1.

- [*10] 10. A papermakers' double layer type fabric according to claim 7, wherein both said lower surface polyamide wefts and lower surface polyester wefts are each interlaced with two adjacent warps.
- [*11] 11. A papermakers' double layer type fabric according to claim 10, wherein said lower surface polyamide wefts are of larger diameter than said lower surface polyester wefts.
- [*12] 12. A papermakers' double layer type fabric according to claim 10, wherein the number of said lower surface polyamide wefts and that of said lower surface polyester wefts are in a ratio of from 1:3 to 3:1.
- [*13] 13. A papermakers' double layer type fabric according to claim 7, wherein said lower surface polyester wefts are each interlaced twice in one repeat with a warp, and said lower surface polyamide wefts are each interlaced once ...
- ... [*13] pair of adjacent warps between which a warp interlacing with an upper surface weft at a position where said pair of warps interlace with the lower surface polyamide weft, is disposed.
- [*14] 14. A papermakers' double layer type fabric according to claim 13, wherein a non-interlacing warp is arranged adjacent to a warp interlacing with said lower surface polyester weft.
- [*15] 15. A papermakers' double layer type fabric according to claim 13, wherein at least one of a pair of warps which interlace with said lower surface polyamide weft also interlaces with the lower surface polyester weft.
- [*16] 16. A papermakers' double layer type fabric according to claim 13, wherein said lower surface polyamide wefts are of larger diameter than said lower surface polyester wefts.
- [*17] 17. A papermakers' double layer type fabric according to claim 13, wherein the number of said lower surface polyamide wefts and that of said lower surface polyester wefts are in a ratio of 1:3 to 3:1.
- [*18] 18. A papermakers' double layer type fabric according to claim 13, wherein said lower surface polyamide wefts are each interlaced once in one repeat with a pair of adjacent warps between which a warp interlacing with an upper surface ...
- ... [*18] polyester wefts are each interlaced twice in one repeat with a warp located between a pair of warps interlacing with a lower surface polyamide weft.
- [*19] 19. A papermakers' double layer type fabric according to claim 18, wherein said lower surface polyamide wefts are of larger diameter than said lower surface polyester wefts.

[*20] 20. A papermakers' double layer type fabric according to claim 18, wherein the number of said lower surface polyamide wefts and that of said lower surface polyester wefts are in a ratio of from 1:3 to 3:1.

PAGE

LEVEL 1 - 86 OF 225 PATENTS

5,005,057

<=2> GET 1st DRAWING SHEET OF 19

Apr. 2, 1991

Semiconductor light-emitting diode and method of manufacturing the same

INVENTOR: Izumiya, Toshihide, Tokyo, Japan
Ohba, Yasuo, Yokohama, Japan
Hatano, Aki, Tokyo, Japan

... [*7] conductivity type having a zinc blend type crystal structure.

[*8] 8. A diode according to claim 3 or 7, wherein said light-reflection layer has a multilayered structure in which said superlattice layers of the types are alternately stacked with a period which is substantially equal to the light-emitting wavelength.

[*9] 9. A semiconductor light-emitting diode including a light-emitting layer having a p-n junction, comprising:

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LEVEL 1 - 87 OF 225 PATENTS

4,996,108

<=2> GET 1st DRAWING SHEET OF 9

Feb. 26, 1991

Sheets of transition metal dichalcogenides

INVENTOR: Divigalpitiya, W. M. Ranjith, Vancouver, Canada
Frindt, Robert F., Vancouver, Canada
Morrison, S. Roy, Burnaby, Canada

What is claimed is:

[*1] 1. A process for forming sheet-like compositions of the formula:

MX₂:Y

wherein MX₂ is a layer-type transition metal dichalcogenide, M is a metal selected from the group consisting of niobium, tantalum, molybdenum and

tungsten, X is a chalcogen selected from the group consisting of sulfur and selenium and Y is a material located ...

... [*18] A method of coating an object, comprising:

forming a sheet-like composition at an interface between water and a non-metallic liquid which is immiscible with water, the composition having the formula:

MX2:Y

wherein MX2 is a layer-type transition metal dichalcogenide, the M is selected from the group consisting of niobium, tantalum, molybdenum and tungsten; X is selected from the group consisting of sulfur and selenium, and Y is a material located between layers of MX2; and

bringing the ...

... [*18] spread over the object.

[*19] 19. A method as claimed in claim 18, wherein the MX2 is crystalline with c-axes perpendicular to the substrate.

[*20] 20. A composition having the formula:

MX2:Y

wherein MX2 is a layer-type transition metal dichalcogenide selected from the group consisting of molybdenum disulfide and tungsten disulfide; and Y is an

PAGE 97

Pat. No. 4996108, *20

organic material located between layers of MX2.

[*21] 21. A composition as claimed in claim 20, wherein the ...

... [*24] tetrachloride; dimethoxy benzene; 1-chloronaphthalene; chrysene; stearamide; phthalocyanine; copper phthalocyanine and iron pentacarbonyl.

[*25] 25. A object having a surface coated with a composition having the formula:

MX2:Y

wherein MX2 is a layer-type transition metal dichalcogenide, M is a metal selected from the group consisting of niobium, tantalum, molybdenum and tungsten, X is a chalcogen selected from the group consisting of sulfur and selenium, and Y is an organic substance located ...

LEVEL 1 - 88 OF 225 PATENTS

4,980,313

Dec. 25, 1990

Method of producing a semiconductor laser

INVENTOR: Takahashi, Shogo, Itami, Japan

What is claimed is:

- [*1] 1. A method of producing a semiconductor laser comprising:
growing at least a p type lower cladding layer, a quantum well active layer, and an type upper cladding layer successively on a substrate;
depositing a first film as a source for diffusion of n type impurities on a portion of the n type upper cladding layer;

...

PAGE 99

LEVEL 1 - 89 OF 225 PATENTS

4,980,216

Dec. 25, 1990

Transfer for textiles

INVENTOR: Rompp, Walter, Rosenstrasse 46, D-7406 Mossingen, Federal Republic of Germany

... [*10] freely cross-linkable silicon emulsion.

- [*11] 11. A transfer according to claim 10, wherein said separating layer is a polysiloxane compound.

- [*12] 12. A transfer according to claim 1, wherein said separating layer is of the type C1G 2 pure.

- [*13] 13. A transfer according to claim 1, wherein said separating layer is screen-printable.

- [*14] 14. A transfer according to claim 1, wherein said separating layer is manufactured on a ...

PAGE 100

LEVEL 1 - 90 OF 225 PATENTS

4,976,990

Dec. 11, 1990

Process for metallizing non-conductive substrates

INVENTOR: Bach, Wolf, Southbury, Connecticut
Ferrier, Donald R., Thomaston, Connecticut
Kukanskis, Peter E., Woodbury, Connecticut
Williams, Ann S., Southbury, Connecticut
Senechal, Mary J., Canton, Connecticut

... [*3] electroless depositing solution to deposit metal fully and adherently and essentially void-free onto said catalyzed through-hole surfaces.

[*4] 4. In a process for manufacturing printed circuit boards of the multi-layer type, in which a planar composite substrate material is provided comprised of a laminate of alternating parallel layers of metal and non-conductive, glass-reinforced thermosetting or thermoplastic material, and in which through-holes are provided ...

... [*4] metal depositing solution to deposit metal fully and adherently and essentially void-free onto said catalyzed through-hole surfaces.

[*5] 5. In a process for manufacturing printed circuit boards of the multi-layer type, in which a planar composite substrate material is provided comprised of a laminate of alternating parallel layers of metal and non-conductive, glass-reinforced thermosetting or thermoplastic material, and in which through-holes are provided ...

... [*11] time of said process for metallizing said through-hole surfaces.

[*12] 12. A process for providing metallized through-holes in a printed circuit board of the double-sided or multi-layer type, comprising the steps of:

(a) providing a printed circuit substrate material comprised of a member selected from the group consisting of (1) a planar non-conductive material comprised of glass-reinforced thermosetting or ...

... [*12] metal depositing solution to deposit metal fully and adherently and essentially void-free onto said catalyzed through-hole surfaces.

[*13] 13. The process according to claim 12 wherein said printed circuit board is of the multi-layer type and wherein said through-hole surfaces are desmeared between steps (b) and (c).

[*14] 14. A process for providing a full-coverage, essentially void-free, adherent metal layer on the surface of a ...

LEVEL 1 - 91 OF 225 PATENTS

4,963,450

Oct. 16, 1990

Electrophotographic photosensitive member with disazo pigment

INVENTOR: Miyazaki, Hajime, Yokohama, Japan
Go, Shintetsu, Yokohama, Japan
Senoo, Akihiro, Yokohama, Japan
Iuchi, Kazushi, Yokohama, Japan
Kanemaru, Tetsuro, Tokyo, Japan

What is claimed is:

[*1] 1. A laminated layer type electrophotographic photosensitive member having a charge generation layer and a charge transport layer on an electroconductive support, characterized in that the charge generation layer has at least one of disazo pigments [is by] of the formulae (1) and (...

PAGE 102

LEVEL 1 - 92 OF 225 PATENTS

4,941,737

<=2> GET 1st DRAWING SHEET OF 5

Jul. 17, 1990

Liquid-crystal display device using twisted nematic liquid crystal molecules

INVENTOR: Kimura, Naofumi, Nara, Japan

What is claimed is:

[*1] 1. A liquid-crystal display device comprising:

a multi-layer-type liquid-crystal cell that is composed of at least first and second cell layers, said cell layers containing liquid-crystal molecules with a twisted nematic orientation therein;

said first cell layer having an angle of ...

LEVEL 1 - 93 OF 225 PATENTS

4,932,788

<=2> GET 1st DRAWING SHEET OF 4

Jun. 12, 1990

Monitoring of the quality of a flowing vapor

INVENTOR: Yeh, George C., 2 Smedley Dr., Newtown Square, Pennsylvania 19073

... [*5] 1 wherein said flowmeter is a mass flowmeter capable of directly metering the mass flow rate of the vaporized sample.

[*6] 6. A system according to claim 5 wherein said mass flowmeter is of an electrothermal boundary-layer type flowmeter in which temperature sensing and

heating elements are placed outside the pipe carrying said stream of sample vapor and do not obstruct the stream.

[*7] 7. A system according to claim 1 wherein said means ...

... [*16] said heater means further comprises:

a thermal insulator completely covering said shell and the inlet and outlet thereof.

[*17] 17. Apparatus according to claim 11 wherein said mass flowmeter means is of the electrothermal boundary-layer type for permitting unobstructed flow.

[*18] 18. Apparatus according to claim 11 wherein said second sensing means comprises:

thermistors formed into thin bands and placed around the inlet and outlet of said heater means.

[*19] ...

LEVEL 1 - 94 OF 225 PATENTS

4,888,261

<=2> GET 1st DRAWING SHEET OF 5

Dec. 19, 1989

Electrophotographic photosensitive member

INVENTOR: Mabuchi, Minoru, Tokyo, Japan

... [*6] electrophotographic photosensitive member of claim 1, wherein said charge transport layer is laminated on said charge generation layer.

[*7] 7. The electrophotographic photosensitive member of claim 1, wherein said photosensitive layer has a single layer type that the charge-generating material and the charge-transporting material are contained in the same layer.

PAGE 105

LEVEL 1 - 95 OF 225 PATENTS

4,886,721

<=2> GET 1st DRAWING SHEET OF 10

Dec. 12, 1989

Electrophotographic plate by use of metal naphthalocyanine derivative

INVENTOR: Hayashida, Shigeru, Hitachi, Japan
Tai, Seiji, Hitachi, Japan

Hayashi, Nobuyuki, Hitachi, Japan
Iwakabe, Yasushi, Hitachi, Japan
Kinjo, Noriyuki, Hitachi, Japan
Numata, Shunichi, Hitachi, Japan

... [*3] germaniumnaphthalocyanine,
bis(tripropylsiloxy)germaniumnaphthalocyanine,
bis(tributylsiloxy)germaniumnaphthalocyanine,
bis(triphenylsiloxy)germaniumnaphthalocyanine and
bis(triethylsiloxy)tinnaphthalocyanine.

[*4] 4. The electrophotographic plate according to claim 1, wherein said photoconductive layer is a complex double layer type comprising a charge generation layer containing said metal naphthalocyanine derivative which is a charge generation substance, and said charge transport layer containing a charge transport substance.

[*5] 5. The electrophotographic ...
LEVEL 1 - 96 OF 225 PATENTS

4,877,702

Oct. 31, 1989

Electrophotographic sensitive material

INVENTOR: Miyamoto, Eiichi, Osaka, Japan
Mutou, Nariaki, Daito, Japan
Nakazawa, Tooru, Osaka, Japan

What is claimed is:

[*1] 1. An electrophotographic sensitive material provided with a single-layer type sensitive layer containing an electric charge generating substance, an electric charge transferring substance, and a binding resin, characterized in that said electric charge generating substance is a perylene type compound ...

LEVEL 1 - 97 OF 225 PATENTS

4,867,827

Sep. 19, 1989

Process for gold foil stamping in relief

INVENTOR: Lesieur, Frederic, 25, Rue Pradier, Paris, France 75019

I claim:

[*1] 1. A method of gilding raised images formed by a thermographic process on a substrate with a marking layer of the type releasably disposed on a backing film comprising the steps of:

providing a thermally activated adhesive powder of the type that exhibits adhesive properties while in a solidified state;

printing a selected ...

... [*9] percentage basis, of 65% styrene oleophthalic resin; 15% to 20% acrylic resin; 10% to 15% plasticizer; 5% to 10% microcrystalline wax.

[*10] 10. A method of gilding a substrate with a marking layer of the type releasably disposed on a backing film, comprising the steps of:

providing a thermally activated adhesive powder of the type that will liquefy under a sufficient amount of heat and will exhibit adhesive properties when ...

PAGE 108

LEVEL 1 - 98 OF 225 PATENTS

4,852,693

<=2> GET 1st DRAWING SHEET OF 2

Aug. 1, 1989

Lubrication monitoring apparatus for machine

INVENTOR: Nakajima, Yoshiaki, Yono, Japan
Suzuki, Tadashi, Machida, Japan
Wada, Yoneji, Urawa, Japan

... [*4] a separate pump and supplied to said lubricated mechanical section.

[*5] 5. A lubrication monitoring apparatus for a machine as claimed in claim 1, wherein said filter is a deep-layer type filter.

[*6] 6. A lubrication monitoring apparatus for a machine as claimed in claim 1, wherein said warning device is connected with a recorder to make a recording when difference in ...

LEVEL 1 - 99 OF 225 PATENTS

4,822,590

<=2> GET 1st DRAWING SHEET OF 3

Apr. 18, 1989

Forms of transition metal dichalcogenides

INVENTOR: Morrison, S. Roy, Burnaby, Canada
Frindt, Robert F., Vancouver, Canada
Joensen, Per, Coquitlam, Canada
Gee, Michael A., Vancouver, Canada
[Miremadi, Bijan K., Coquitlam, Canada]

We claim:

[*1] 1. An exfoliation process for preparing a single layer substance of the form

MX 2

wherein MX2 is a layer type transition metal dichalcogenide selected from the group consisting of MoS₂, TaS₂, WS₂, which comprises:

(a) intercalating multi-layer MX2 with an alkali metal in a dry environment for sufficient time to enable the ...

LEVEL 1 - 100 OF 225 PATENTS

4,800,568

<=2> GET 1st DRAWING SHEET OF 1

Jan. 24, 1989

Gas laser with a frequency-selective dielectric layer system

INVENTOR: Krueger, Hans, Munich, Federal Republic of Germany
Good, Hans P., Sargans, Switzerland

... [*1] said means being a frequency selective layer system being formed on the Brewster window, said system comprising:

a plurality of successive layers, said plurality of layers including only two layer types and including alternating high refractive index first layers and low refractive index second layers, each of said first layers having substantially a first optical thickness and each of said second layers having ...

... [*9] opposite ends through which laser radiation is emitted, an improved frequency selective layer system comprising:

a plurality of successive layers on said Brewster window, said plurality of layers including only two layer types and including alternating high refractive index first layers and low refractive index second layers, each of said first layers having substantially a thickness of 71.2 nm and each of said second layers having ...

LEVEL 1 - 101 OF 225 PATENTS

4,790,954

PAGE 111

PAGE 110

Dec. 13, 1988

Mixed metal hydroxide-clay adducts as thickeners for water
and other hydrophylic fluids

INVENTOR: Burba, III, John L., Angleton, Texas
Barnes, Audrey L., Lake Jackson, Texas

... [*16] saconite, vermiculite, chlorite, attapulgite, sepiolite,
palygorskite, and Fullers' earth.

[*17] 17. The method of claim 1 wherein the mineral clay is at least one of
the group consisting of amorphous clays of the allophane group and crystalline
clays of the 2-layer type, 3-layer type, expanding type, non-expanding type,
elongate type, regular mixed layer type, and chain structure type.

[*18] 18. The method of claim 1 wherein the mineral clay is bentonite.

[*19] 19. The method of claim 1 wherein the mineral clay is beneficiated
bentonite.

[*20] 20. The method of claim 1 wherein the weight ratio of monolayered ...

PAGE 112

LEVEL 1 - 102 OF 225 PATENTS

4,775,814

<=2> GET 1st DRAWING SHEET OF 3

Oct. 4, 1988

Saw device

INVENTOR: Yuhara, Akitsuna, Kawasaki, Japan
Sasaki, Jun, Sagami-hara, Japan
Hirashima, Tetsuya, Yokohama, Japan
Yamada, Jun, Yokohama, Japan

... [*16] substrate and sets of finger electrodes disposed on said
substrate, at least one set of said electrodes having a laminated structure made
up of a plurality of layers including at least one of a first layer type of an
aluminum film and at least one of a second layer type of an aluminum film which
includes an impurity selected from the group consisting of titanium, chromium,
vanadium and manganese.

[*17] 17. A SAW device according to claim 16, wherein said laminated
structure includes a first layer of said first layer type formed on said
substrate and a second layer of said second layer type formed on said first
layer, the thickness of said first layer being greater than the thickness of
said second layer.

[*18] 18. A SAW device according to claim 16, wherein said laminated structure includes a first layer of said second layer type formed on said substrate and a second layer of said first layer type formed on said first layer, the thickness of said second layer being greater than the thickness of said first layer.

[*19] 19. A SAW device according to claim 16, wherein said laminated structure includes a first layer of said first layer type formed on said substrate, a second layer of said second layer type formed on said first layer, and a third layer of said first layer type formed on said second layer, the combined thickness of said first and third layers being greater than the thickness of said second layer.

[*20] 20. A SAW device according to claim 16, wherein said laminated structure includes a first layer of said second layer type formed on said substrate, a second layer of said first layer type formed on said first layer, and a third layer of said second layer type formed on said second layer, the thickness of said second layer being greater than the combined thickness of said first and third layers.

[*21] 21. A SAW device according to claim 16, wherein said laminated structure includes a first layer of said first layer type formed on said substrate, a second layer of said second layer type formed on said first layer, a third layer of said first layer type formed on said second layer, and a fourth layer of said second layer type formed on said third layer, the combined thickness of said first and third layers being greater than the combined thickness of said second and fourth layers.

Pat. No. 4775814, *21

[*22] 22. A SAW device according to claim 17, wherein said first layer type includes an impurity selected from the group consisting of titanium, copper, magnesium, zinc and nickel.

[*23] 23. A SAW device according to claim 22, wherein said first layer includes first and second sublayers having different ...
LEVEL 1 - 103 OF 225 PATENTS

4,773,074

<=2> GET 1st DRAWING SHEET OF 2

Sep. 20, 1988

Dual mode laser/detector diode for optical fiber
transmission lines

INVENTOR: Hunsperger, Robert G., Newark, Delaware
Park, Jung H., Newark, Delaware

... [*12] conductivity type of the active layer, the waveguide layer having first and second surfaces, the first surface in contact with the second surface of the active layer;

a confining layer having a conductivity layer opposite the active layer type and having a surface in contact with the second surface of the waveguide layer; cap and substrate layers; and

means to couple the cell and optical and electrical circuits.

AGE 115

LEVEL 1 - 104 OF 225 PATENTS

4,761,242

<=2> GET 1st DRAWING SHEET OF 2

Aug. 2, 1988

Piezoelectric ceramic composition

INVENTOR: Suzuki, Kazunori, Nagoya, Japan
Naitoh, Masataka, Kariya, Japan

... [*14] constant-temperature characteristic, said additive being selected from the group consisting of 10-55 mol % CaTiO₃ and 1-15 mol % SrTiO₃, and

the balance of the composition being PbBi₄Ti₄₀15 having a Bi-layer type structure which PbBi₄Ti₄₀15 has a positive dielectric constant-temperature characteristic,

a change in the dielectric constant of the PbBi₄Ti₄₀15 which change occurs by a change in temperature being substantially compensated for ...

116

LEVEL 1 - 105 OF 225 PATENTS

4,753,187

<=2> GET 1st DRAWING SHEET OF 4

Jun. 28, 1988

Individual submarine diving equipment

INVENTOR: Galimand, Patrice, Paris, France

... [*10] tightness and passage of electric connection between the container and the motor are provided.

[*11] 11. The device of claim 1, comprising a control for the motor realized by a moulding-on of a contactor of the deformable thin layer type, said moulding-on having the form of a buckle portion completed by a strip having

pressure connecting means for connection around a hand of the diver, the buckle element being disposable around the diver's ...

LEVEL 1 - 106 OF 225 PATENTS

4,729,459

<=2> GET 1st DRAWING SHEET OF 9

Mar. 8, 1988

Adjustable damping force type shock absorber

INVENTOR: Inagaki, Mitsuo, Okazaki, Japan
Sasaya, Hideaki, Okazaki, Japan
Takeda, Kenji, Aichi, Japan
Nakano, Hiromichi, Okazaki, Japan
Kamiya, Sigeru, Aichi, Japan
Ishida, Toshinobu, Okazaki, Japan

... [*1] said plunger to that of said other end surface of said sliding member.

[*2] 2. An adjustable damping force type shock absorber according to claim 1, wherein said piezo-electric body is a lamination layer type piezo-electric body constituted by laminating in an axial direction a plurality of piezo-electric elements having a piezo-electric effect in which application of a stress in the axial direction ...

... [*4] piezo-electric body on the basis of the electric signal from the damping force sensor.

[*5] 5. An adjustable damping force type shock absorber according to claim 4, wherein said piezo-electric body is a lamination layer type piezo-electric body constituted by laminating a plurality of piezo-electric elements.

[*6] 6. An adjustable damping force type shock absorber according to claim 5, wherein said lamination layer type piezo-electric body comprises electrode plates inserted between adjacent piezo-electric elements and forming, respectively, a first electrode by connecting alternate electrode plates in parallel and a ...

LEVEL 1 - 107 OF 225 PATENTS

4,723,601

Feb. 9, 1988

Multi-layer type heat exchanger

INVENTOR: Ohara, Toshio, Kariya, Japan
Tsuchiya, Kiyomitsu, Okazaki, Japan
Kittaka, Kiyoshi, Aichi, Japan
Sudo, Yasuhiro, Okazaki, Japan

Yamauchi, Yoshiyuki, Aichi, Japan
Miyata, Yoshio, Nagoya, Japan

What is claimed is:

[*1] 1. A multi-layer type heat exchanger including:

a row of a plurality of substantially parallel flat tubes each formed by two core plates prepared by press work and sealingly jointed together;

each ...

... [*7] one outermost core plate to assure that said protecting plate is spaced from said one outermost core plate a distance sufficient to accommodate said further corrugated fin.

[*8] 8. A multi-layer type heat exchanger including:

a row of a plurality of substantially parallel flat tubes each formed by two core plates prepared by press work and sealingly jointed together;

each ...

LEVEL 1 - 108 OF 225 PATENTS

4,703,266

<=2> GET 1st DRAWING SHEET OF 4

Oct. 27, 1987

Gradient meter with thin magnetic layer

INVENTOR: Chiron, Guy, Gieres, France
Dumont, Andre, St. Egreve, France

... [*1] meter to measure the spatial derivatives

delta $H_i / \delta x_j$ ($i = x, y, z; j = x, y, z$)

of a magnetic field H utilizing magnetic sonds with a thin layer of the type which comprises:

a magnetic layer of cylindrical form of revolution, the magnetic layer having an axis of difficult magnetization parallel to the axis of the cylinder and an axis of easy magnetization that is circular in a plane of the layer in a ...

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LEVEL 1 - 109 OF 225 PATENTS

4,702,019

<=2> GET 1st DRAWING SHEET OF 7

Oct. 27, 1987

Apparatus for cooling high-temperature particles

INVENTOR: Tsuruno, Masayoshi, Funabashi, Japan
Horie, Michihiko, Nagareyama, Japan

... [*1] said guide tube and is vertically reciprocable so that displacement in the radially outward directions of said high-temperature particles along an outer surface of said conical or pyramidal body is facilitated, and a second packed layer type cooling zone disposed below said first cooling zone for gradually cooling said high-temperature particles while said high-temperature particles which have been rapidly cooled in said first ...

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LEVEL 1 - 110 OF 225 PATENTS

4,696,548

<=> GET 1st DRAWING SHEET OF 7

Sep. 29, 1987

Antiglare mirror for an automobile

INVENTOR: Ueno, Yoshiki, Okazaki, Japan
Taguchi, Takasi, Anjo, Japan
Hattori, Tadashi, Okazaki, Japan

... [*1] selected thickness, so that light reflecting from said mirror and passing through said first dielectric layer has desired color characteristics.

[*2] 2. A mirror arrangement according to claim 1, wherein said liquid crystal layer is of the type whose transparency is reduced when an electric field is applied thereto compared to that when an electric field is not applied thereto.

[*3] 3. A mirror arrangement according to claim 1, further comprising: a second transparent dielectric layer located on the ...

LEVEL 1 - 111 OF 225 PATENTS

4,686,159

<=> GET 1st DRAWING SHEET OF 3

Aug. 11, 1987

Laminated layer type fuel cell

INVENTOR: Miyoshi, Hideaki, Kobe, Japan

What is claimed is:

[*1] 1. A laminated layer type fuel cell for converting electrochemical reaction of fuel and oxidizer into electric power, said fuel cell comprising a plurality of gas separation plates, each having rectilinear and zigzag portions of fuel and oxidizer ...

... [*1] electrolyte matrix, and an oxidizer electrode whereby partial pressures of reaction gases produced by the electrochemical reaction are equalized throughout the cell to equalize cell reactions and temperature distribution in the cell.

[*2] 2. A laminated layer type fuel cell as claimed in claim 1 wherein the rectilinear and zigzag portions of fuel and oxidizer channels have a length ratio of 1:1 and the zigzag portions are alternately disposed at upstream and downstream sides of the reaction gases.

[*3] 3. A laminated layer type fuel cell as claimed in claim 1 wherein the rectilinear and zigzag portions of fuel and oxidizer channels have a length ratio of 2:1 to 4:1 and the zigzag portions are sequentially displaced with respect to each channel.

LEVEL 1 - 112 OF 225 PATENTS

4,673,591

Jun. 16, 1987

Production of layer-type magnetic recording media

INVENTOR: Lehner, August, Roedersheim-Gronau, Federal Republic of Germany
Heil, Guenter, Ludwigshafen, Federal Republic of Germany
Lenz, Werner, Bad Dürkheim, Federal Republic of Germany
Balz, Werner, Limburgerhof, Federal Republic of Germany
Kohl, Albert, Laumersheim, Federal Republic of Germany
Schornick, Gunnar, Neuleiningen, Federal Republic of Germany

We claim:

[*1] 1. A process for the production of a layer-type magnetic recording medium by dispersing a finely divided magnetically anisotropic material in a binder which consists of not less than 30% of a radiation-curable aqueous binder dispersion, applying the ...

LEVEL 1 - 113 OF 225 PATENTS

4,671,969

Jun. 9, 1987

Production of layer-type magnetic recording media

INVENTOR: Lehner, August, Roedersheim-Gronau, Federal Republic of Germany
Balz, Werner, Limburgerhof, Federal Republic of Germany
Lenz, Werner, Bad Dürkheim, Federal Republic of Germany

We claim:

[*1] 1. A process for the production of a layer-type magnetic recording medium by dispersing a finely divided magnetically anisotropic material in a binder which consists of not less than 40% of a radiation-curable aqueous binder dispersion, applying the ...

LEVEL 1 - 114 OF 225 PATENTS

4,671,255

<=2> GET 1st DRAWING SHEET OF 2

Jun. 9, 1987

Tissue expander with self-contained injection reservoir and reinforcing insert

INVENTOR: Dubrul, William R., Santa Barbara, California
Heyler, III, Charles J., Thousand Oaks, California

... [*11] claim 10 wherein the plastic resin embedding the magnetically detectable material is further embedded in a silicone elastomer.

[*12] 12. A tissue expander device for surgical implantation beneath the skin and the subcutaneous layer of the type which is expanded after implantation by periodic injection of a liquid, such as saline into the expander device, the tissue expander comprising:

a thin expandable biocompatible cast silicone elastomer envelope forming an expandable ...

... [*16] tissue expander of claim 15 wherein the magnet in the injection reservoir is embedded in vapor barrier material.

[*17] 17. In a tissue expander used for surgical implantation beneath the skin and the subcutaneous layer of the type which is expanded after implantation by periodic injection of liquid into the expander device, the tissue expander having an expandable biocompatible envelope forming an expandable fluid-tight chamber configured to include an apex and an injection reservoir fully ...

... [*22] reservoir whereby location of the injection reservoir can be ascertained by external means for locating the magnet.

[*23] 23. In a tissue expander used for surgical implantation beneath the skin and the subcutaneous layer of the type which is expanded after implantation by periodic injection of a liquid into the expander device, the tissue expander having an expandable biocompatible envelope forming an expandable fluid-tight chamber configured to include an apex and an injection reservoir ...

LEVEL 1 - 115 OF 225 PATENTS

4,667,209

<=2> GET 1st DRAWING SHEET OF 3

May 19, 1987

Image recording apparatus

INVENTOR: Hakamada, Isao, Yokohama, Japan
Matsuoka, Kazuhiko, Yokohama, Japan

We claim:

[*1] 1. An image recording apparatus comprising:

a multi-layer type photosensitive medium; and

means for recording images by scanning said photosensitive medium with a laser beam, said means including a semiconductor laser which produces multimode oscillations, said laser ...

LEVEL 1 - 116 OF 225 PATENTS

4,664,857

May 12, 1987

Process for preparing a hydrogel

INVENTOR: Nambu, Masao, Yokohama, Japan

... [*1] a water-insoluble hydrogel having a water content of 20 to 92% by weight.

[*2] 2. A process according to claim 1, in which clay minerals of a laminated structure having a three-layer type (2:1 type) composite layer as a basic unit are suspended in said aqueous polyvinyl alcohol solution in an amount of not more than five times by weight the amount of said ...

LEVEL 1 - 117 OF 225 PATENTS

4,664,843

May 12, 1987

Mixed metal layered hydroxide-clay adducts as thickeners for water and other hydrophylic fluids

INVENTOR: Burba, III, John L., Angerton, Texas
Barnes, Audrey L., Lake Jackson, Texas

... [*16] vermiculite, chlorite, attapulgite, sepiolite, palygorskite, and Fuller's earth.

[*17] 17. The composition of claim 1 wherein [tne] the mineral clay is at least one of the classes consisting of amorphous clays of the allophane group and crystalline clays of the 2-layer type, 3-layer type, expanding type, non-expanding type, elongate type, regular mixed layer type, and chain structure type.

[*18] 18. The composition of claim 1 wherein the mineral clay is bentonite.

[*19] 19. The composition of claim 1 wherein the mineral clay is beneficiated bentonite.

[*20] 20. The composition of claim 1 wherein the weight ratio of layered
...
LEVEL 1 - 118 OF 225 PATENTS
PAGE 129

4,659,401

<=2> GET 1st DRAWING SHEET OF 2

Apr. 21, 1987

Growth of epitaxial films by plasma enhanced chemical vapor deposition (PE-CVD)

INVENTOR: Reif, L. Rafael, Newton, Massachusetts
Fonstad, Jr., Clifton G., Arlington, Massachusetts

... [*11] establishing a steady state flow of said first set of gaseous reactants in said chamber, said reactants having a concentration of atoms of a first type conductivity, such as to produce a layer of that type conductivity when deposited;

(c) after steady state flow is achieved heating said substrate to a temperature high enough to obtain epitaxial deposition from the first set of reactants when a decomposition reaction occurs ...
LEVEL 1 - 119 OF 225 PATENTS

4,644,335

<=2> GET 1st DRAWING SHEET OF 4

Feb. 17, 1987

Apparatus and method for monitoring drill bit condition and depth of drilling

INVENTOR: Wen, Sheree H., Mohegan Lake, New York

... [*1] number of occurrences of the waveform representing the acoustic signature for each type of layer; and

means for stopping the drilling operation upon reaching a predetermined count of waveform occurrences for a particular layer type.

[*2] 2. The apparatus of claim 1 wherein said control means includes a computer for comparing the detected sequence of waveforms to a reference sequence of waveforms stored in said computer corresponding to the multilayered ...

... [*6] type of layer for each signal; and

means for separately stopping the drilling operation of at least one drill bit upon reaching a predetermined count of waveform occurrences for a particular layer type for each drill bit.

[*7] 7. The apparatus of claim 1 or 6 further including a filter means for filtering out low and high frequency noise.

[*8] 8. In a multiple ...

... [*8] said reference signal representing an acoustic signature for a proper drill bit drilling having each type of layer, for counting the number of occurrences of the waveform representing the acoustic signature for each layer type for each of said drill bits, and for detecting when the acoustic signature of at least one of said output signals is different from the acoustic signature of said reference signal thereby detecting an improper drill bit condition; and

...

... [*8] bit upon detection of an improper drill bit condition; and

means for stopping the drilling operation of at least one drill bit upon reaching a predetermined count of waveforms occurrences of a particular layer type for one or more drill bits.

[*9] 9. A method for drilling to a predetermined depth of a multilayer workpiece comprising:

acoustically detecting drill bit vibrations as the drill bit ...

... [*9] layer; Pat. No. 4644335, *9

counting the number of occurrences of the waveform representing the acoustic signatures for each type of layer; and

stopping the drilling operation upon reaching a predetermined count of waveform occurrences for a particular layer type.

[*10] 10. The method of claim 9 further including the steps of producing an output signal having a sequence of waveforms representing the acoustic signatures corresponding to the sequence of layers, comparing the sequence of waveforms to a reference sequence and ...

... [*12] least one of said output signals and said reference signal; and stopping the drilling operation of at least one drill bit upon reaching a predetermined count of waveform occurrences for a particular layer type for one or more drill bits.

PAGE 132

LEVEL 1 - 120 OF 225 PATENTS

4,629,632

Dec. 16, 1986

Production of magnetic recording media

INVENTOR: Balz, Werner, Limburgerhof, Federal Republic of Germany
Kovacs, Jenoe, Hesseheim, Federal Republic of Germany
Lechner, Hilmar, Frankenthal, Federal Republic of Germany
Schäfer, Dieter, Lindenberg, Federal Republic of Germany
Buethe, Ingolf, Boehl-Iggelheim, Federal Republic of Germany

We claim:

[*1] 1. A process for the production of a layer-type magnetic recording medium by applying a dispersion of a magnetically anisotropic material in a binder solution onto a flexible plastic base provided with an adhesion-promoting intermediate layer and then solidifying the ...

LEVEL 1 - 121 OF 225 PATENTS

4,617,423

<=2> GET 1st DRAWING SHEET OF 6

Oct. 14, 1986

Data communication system

INVENTOR: Dickerson, James W., Plano, Texas
Smith, III, William N., Carrollton, Texas

What is claimed is:

[*1] 1. A network multiple physical layer interface connected to a communications network of a first physical layer type and a second physical layer type, each layer type including a send channel and a receive channel, said interface comprising:

PAGE 133

a first circuit means for receiving data from said first physical layer send channel and receive channel and ...

LEVEL 1 - 122 OF 225 PATENTS

4,614,185

<=2> GET 1st DRAWING SHEET OF 1

Sep. 30, 1986

Piston engine having a phosphatized cylinder wall

INVENTOR: Fox, Richard C., Mobile, Alabama

... [*4] 1, wherein said integral layer of crystalline phosphate is characterized by resistance to wear by said piston ring during operation of said engine.

[*5] 5. The invention according to claim 1, wherein said integral layer is of the type assisting the seating of said piston ring in said cylinder.

[*6] 6. The invention according to claim 1, wherein said cylinder head is an aluminum cylinder head.

[*7] 7. The invention according to claim 6, wherein said ...

GE 135

LEVEL 1 - 123 OF 225 PATENTS

4,611,114

<=2> GET 1st DRAWING SHEET OF 2

Sep. 9, 1986

Photoelectric detection structure having substrate with controlled properties

INVENTOR: Dolizy, Pierre, Ris-Orangis, France
Groliere, Francoise, Nogent-sur-Marne, France
Maniquet, Francois, Fontenay-Tresigny, France

... [*8] according to claim 7, wherein said tri-alkaline material is SbNa2K, Cs.

[*9] 9. A photoelectric detection structure according to claim 7, wherein said photosensitive layer has a thickness corresponding to a photoelectric layer of the type S20 or S25.

[*10] 10. A photoelectric detection structure according to claim 2, wherein said photosensitive layer is a bi-alkaline photosensitive material.

[*11] 11. A photoelectric detection structure according to claim ...
PAGE 136

LEVEL 1 - 124 OF 225 PATENTS

4,604,673

Aug. 5, 1986

Distribution transformer with surge protection device

INVENTOR: Schoendube, Charles W., Hickory, North Carolina

What I claim as new is:

[*1] 1. A distribution-type single-phase transformer having a surge protection arrangement comprising;

(a) a layer-type high voltage winding having two terminals, one being a high voltage terminal for connection to a high voltage line,

(b) a divided low voltage winding comprising two ...
LEVEL 1 - 125 OF 225 PATENTS

4,587,720

<=> GET 1st DRAWING SHEET OF 1

May 13, 1986

Process for the manufacture of a self-aligned thin-film transistor

INVENTOR: Chenevas-Paule, Andre , Grenoble, France
Diem, Bernard, Meylan, France

... [*2] wavelength of the order of 600 nanometers.

[*3] 3. A process according to claim 1, wherein step (h) comprises:
depositing a layer of n + type amorphous silicon on the entire structure;
depositing a conducting layer on the type n + silicon layer;

eliminating the regions respectively of the conducting layer and of the type n + silicon layer situated in line with said grid; and

making the electrodes of the source and of the drain in said conducting layer.

[*4] 4. A process according to claim 1, wherein said insulating layer is ...
PAGE 138

LEVEL 1 - 126 OF 225 PATENTS

4,584,553

Apr. 22, 1986

Coated layer type resistor device

INVENTOR: Tokura, Norihito, Nukata, Japan
Kawai, Hisasi, Toyohashi, Japan

We claim:

[*1] 1. A coated layer type resistor device comprising:

an insulator substrate;

a first resistor element formed on said insulator substrate and consisting of a resistor layer and end conductor electrodes at the ends of said resistor layer; and

a ...

... [*1] conductor electrodes and the adjacent intermediate conductor in said second resistor element being equal to the distance between end conductor electrodes in said first resistor element.

[*2] 2. A coated layer type resistor device according to claim 1, wherein:

said end conductor electrodes and said intermediate conductors are formed by printing on said insulator substrate;

on said insulator substrate having said formed end conductor electrodes and intermediate conductors, a resistor layer is formed by printing; and

said formed resistor layer is in contact with said formed end conductor electrodes and intermediate conductors.

[*3] 3. A coated layer type resistor device according to claim 1, wherein a bridge circuit is constituted by said first and second resistor elements.

PAGE 139

LEVEL 1 - 127 OF 225 PATENTS

4,576,116

<=2> GET 1st DRAWING SHEET OF 1

Mar. 18, 1986

Collapsible house for cats

INVENTOR: Binkert, Gerald A., 308 Gould Ave. SE., Bemidji, Minnesota 56601

... [*1] A collapsible A-frame house providing a common site for a cat to rest, exercise and play, comprising

(a) a roof formed of a single unitary continuous flexible layer-type material having a backside and a cushiony outward face, said roof including an elongate peak and two roof panels integral with the peak and depending downwardly and outwardly from the peak, each said roof panel having a bottom edge, the outward face of the flexible layer-type material being the outward face of the roof and being adapted to withstand cat clawing, the peak of the roof being adapted for flexing in a hinge-like manner to permit inward movement of the roof ...

... [*1] another when the house is to be collapsed;

(b) a stiffening means on the backside of each roof panel for supporting the same;

(c) a floor panel formed of a single unitary continuous flexible layer-type material having a bottom side and a cushiony top side, said floor panel having opposing edges thereof affixed to the bottom edges of the roof panels to limit the separation distance between said bottom edges, the floor panel being adapted for folding along its longitudinal center line generally parallel to its opposing edges, and the flexible layer-type material adjacent the junction of the bottom edges of the roof panels and the opposing edges of the floor panel being such as to serve a hinge function for allowing the floor panel to fold as the roof panels ...

... [*10] A collapsible A-frame house providing a common site for a cat to rest, exercise and play, comprising

(a) a roof formed of a single unitary continuous flexible layer-type material having a backside and a cushiony outward face, said roof including an elongate peak and two roof panels integral with the peak and depending downwardly and outwardly from the peak, each said roof panel having a bottom edge, the outward face of the flexible layer-type material being the outward face of the roof and being adapted to withstand cat clawing, the peak of the roof being adapted for flexing in a hinge-like manner to permit inward movement of the roof ...

... [*10] another when the house is to be collapsed;

(b) a stiffening means on the backside of each roof panel for supporting the same; and

(c) a floor panel formed of a single unitary continuous flexible layer-type material having a bottom side and a cushiony top side, said floor panel having opposing edges thereof affixed by staples to the bottom edges of the roof

PAGE 140

Pat. No. 4576116, *10

panels to limit the separation distance between said bottom edges, the floor panel being adapted for folding along its longitudinal center line generally parallel to its opposing edges, and the flexible layer-type material adjacent the junction of the bottom edges of the roof panels and the opposing edges of

the floor panel being such as to serve a hinge function for allowing the floor panel to fold as the roof panels ...

PAGE 141

LEVEL 1 - 128 OF 225 PATENTS

4,566,460

<=2> GET 1st DRAWING SHEET OF 13

Jan. 28, 1986

Measuring method and apparatus for non-linear parameter of
acoustic medium and its application

INVENTOR: Sato, Takuso, Tokyo, Japan
Ichida, Nobuyuki, Machida, Japan
Miwa, Hirohide, Kawasaki, Japan

... [*20] reception characteristics sufficient to cover both receiving said
probing wave and transmitting said pumping wave.

[*21] 21. An apparatus according to claim 10, wherein said second and said
third transducer comprise a layer type transducer, having a front layer as said
second transducer, and a back layer as said third transducer.

[*22] 22. An apparatus according to claim 6, wherein said third means
comprises:

phase ...

PAGE 142

LEVEL 1 - 129 OF 225 PATENTS

4,560,419

<=2> GET 1st DRAWING SHEET OF 3

Dec. 24, 1985

Method of making polysilicon resistors with a low thermal
activation energy

INVENTOR: Bourassa, Ronald R., Colorado Springs, Colorado
Butler, Douglas B., Colorado Springs, Colorado

... [*11] 11. The method of claim 7 including establishing said first,
second and third poly regions to form back-to-back polysilicon diodes.

[*12] 12. The method of claim 8 including doping a poly layer with the
type of impurity for said first region of poly, then defining the poly which is
to act as the resistor, the selectively doping said second and third regions of
poly with the other type of impurity.

[*13] 13. The method of claim 12 wherein the ...
LEVEL 1 - 130 OF 225 PATENTS

PAGE 143

4,547,784

<=2> GET 1st DRAWING SHEET OF 6

Oct. 15, 1985

Thermal recording system and method

INVENTOR: Erlichman, Irving, Wayland, Massachusetts
Haussein, Robert W., Lexington, Massachusetts

... [*1] for recording an image represented by pixel areas of varied density on a transparency type thermally sensitive recording medium having a transparent support layer and a transparent thermally sensitive recording layer of the type wherein recorded dot size increases with increased amounts of thermal energy applied to form a dot, said recording system comprising:

means for supporting such a transparency type of recording medium;

means ...

PAGE 144

LEVEL 1 - 131 OF 225 PATENTS

4,525,223

<=2> GET 1st DRAWING SHEET OF 16

Jun. 25, 1985

Method of manufacturing a thin ribbon wafer of semiconductor material

INVENTOR: Tsuya, Noboru, 1-38, Kashiwagi 2-Chome, Sendai, Japan
Arai, Kenichi, Sendai, Japan

... [*18] moving direction of the cooling substrate and at least two jet flows of semiconductor and gaseous or molten material including the same semiconductor are simultaneously ejected through the holes so as to form a thin ribbon of multiple-layer type.

[*19] 19. A method as defined in claim 1, wherein the thin ribbon is heat-treated at a temperature within the range from 500o C. to a melting point for a time of 0.1 ...

PAGE 145

LEVEL 1 - 132 OF 225 PATENTS

4,523,906

<=2> GET 1st DRAWING SHEET OF 8

Jun. 18, 1985

Device for drying gypsum

INVENTOR: Petrovic, Vladan, Essen, Federal Republic of Germany

... [*1] cold, wet gypsum, comprising a heater; means for feeding a plurality of heat-retaining solid particles into said heater; means for storing gypsum to be dried; a moving-layer-type drier in the form of an upright stationary container having an inlet at its top, an outlet at its bottom and a plurality of superposed funnel-like means arranged between the inlet and the outlet; means for conveying an amount of hot ...

... [*6] cold, wet gypsum, comprising a heater; means for feeding a plurality of heat-retaining solid particles into said heater; means for storing gypsum to be dried; a moving-layer-type drier in the form of an upright stationary container having an inlet at its top, an outlet at its bottom and a plurality of superposed funnel-like means arranged between the inlet and outlet; means for intermixing the amount of hot ...

LEVEL 1 - 133 OF 225 PATENTS

4,513,016

Apr. 23, 1985

No-stir dry mix with pudding nuggets for cake with
discontinuous pudding phase

INVENTOR: Blake, Jon R., 6901 Regent Ave N., Brooklyn Center, Minnesota 55429
Knutson, Richard K., 6948 Valley View Rd., Corcoran, Minnesota 55340
VanHulle, Glenn J., 7608 Major Ave. N., Brooklyn Park, Minnesota 55443

... [*14] length.

[*15] 15. The dry mix of claim 14 wherein the weight ratio of sugar to granules in the matrix ranges from about 1:5 to 1:6.

[*16] 16. A method for preparing a finished cake of a layer type having after baking a discontinuous pudding phase, in the finished baked cake consisting essentially of the steps of:

A. providing a dry mix for cakes, said dry mix comprising

I. from ...

LEVEL 1 - 134 OF 225 PATENTS

4,510,443

<=2> GET 1st DRAWING SHEET OF 4

Apr. 9, 1985

Voltage measuring device

INVENTOR: Inaba, Ritsuo, Hirakata, Japan
Wasa, Kiyotaka, Nara, Japan

What is claimed is:

[*1] 1. A voltage measuring device for receiving and measuring a voltage to be measured and for providing an output signal corresponding thereto, said device comprising:

a first medium of the double layer type for propagating surface acoustic waves, said first medium comprising a piezoelectric thin film which is laminated on a substrate comprising a non-piezoelectric material;

a first transducer means ...

PAGE 148

LEVEL 1 - 135 OF 225 PATENTS

4,506,004

<=2> GET 1st DRAWING SHEET OF 3

Mar. 19, 1985

Printed wiring board

INVENTOR: Sullivan, Donald F., 115 Cambridge Rd., King of Prussia, Pennsylvania 19406

... [*5] substrate, and

developing the photo images by washing out the unhardened photopolymer, whereby removal of the unhardened liquid polymer layer in contact with the substrate is simple and complete.

[*6] 6. The process of claim 5 wherein the laminated photopolymer layers are of the type that are hardened by exposure to the radiation.

[*7] 7. The photo process of claim 6 including the step of partly curing the liquid photopolymer second layer by exposure to radiation before lamination.

[*8] 8. The photo process of ...

LEVEL 1 - 136 OF 225 PATENTS

4,501,303

<=2> GET 1st DRAWING SHEET OF 2

Feb. 26, 1985

Forming fabric

PAGE 149

INVENTOR: Osterberg, Lars B., Halmstad, Sweden

What I claim is:

[*1] 1. An improved double-layer type of forming fabric for use in papermaking, cellulose and similar machines, said forming fabric consisting of two integral weaves, each one of said weaves comprising its separate sets of respective warp ...

PAGE 150

LEVEL 1 - 137 OF 225 PATENTS

4,494,826

<=2> GET 1st DRAWING SHEET OF 2

Jan. 22, 1985

Surface deformation image device

INVENTOR: Smith, James L., 426 High School Dr., Grand Prairie, Texas 75050

... [*2] set forth in claim 1 wherein said grille structure layer is inside said photoconductive layer.

[*3] 3. A device as set forth in claim 1 or 2 wherein said photoconductor

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Date: Tue, 22 Dec 1998 12:45:14 -0500
From: lexis-nexis@prod.lexis-nexis.com (LEXIS(R)/NEXIS(R) Print Delivery)
To: dmorris@watson.ibm.com
Subject: LEXIS(R)/NEXIS(R) Print Request Job 68990, 3 of 4

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[*4] 4. A device as set forth in claim 1 wherein a nonconducting light blocking ...

LEVEL 1 - 138 OF 225 PATENTS

4,477,547

Oct. 16, 1984

Method for making complex layer type lithographic printing plate

INVENTOR: Yamada, Jun, Nagaokayo, Japan
Senga, Takao, Nagaokayo, Japan
Suzuki, Shigeyoshi, Nagaokayo, Japan

What is claimed is:

[*1] 1. A method for making a complex layer type lithographic printing plate which comprises forming a toner image on an original printing plate having organic electrophotographic photosensitive layer by electrophotographic process, said photosensitive layer being a complex layer type photosensitive layer which comprises a charge carrier generating layer comprising a charge carrier generating substance and a binder mainly composed of a polyamide resin soluble in alcohol solvent and ...

... [*1] solution mainly composed of alcohol solvent and/or alkali solvent and thereafter treating non-image area other than the toner image area with the etching solution.

[*2] 2. A method for making a complex layer type lithographic printing plate according to claim 1, wherein the polyamide resin of the binder for the charge carrier generating layer is copolymer nylon.

[*3] 3. A method for making a complex layer type lithographic printing plate according to claim 1 wherein the high molecular substance of the binder for the charge carrier generating layer is one having acid anhydride group, carboxylic acid group, sulfonic acid group or sulfonimide group.

[*4] 4. A method for making a complex layer type lithographic printing plate according to claim 1 wherein the charge carrier generating substance is an organic pigment or sensitizing dye.

[*5] 5. A method for making a complex layer type lithographic printing plate according to claim 1 wherein the charge carrier transport substance is an aromatic tertiary amino compound, an aromatic tertiary diamino compound, an aromatic tertiary triamino compound, a condensate or a heterocyclic compound.

[*6] 6. A method for making a complex layer type lithographic printing plate according to claim 1 wherein the high molecular substance contained in the binder for the charge carrier transfer layer is one having acid anhydride group, carboxylic acid group, sulfonic acid group or sulfonimide group or a phenolic resin.

[*7] 7. An original printing plate having organic electrophotographic photosensitive layer on a support for complex layer type lithographic printing plate on which a toner image is formed, said photosensitive layer comprising a charge carrier generating layer comprising a charge carrier generating substance and a binder mainly ...

Pat. No. 4477547, *7

... [*7] a high molecular substance having a group soluble in an etching solution mainly composed of alcohol solvent and/or alkali solvent.

[*8] 8. A printing method which comprises carrying out printing with the complex layer type lithographic printing plate made by the method of claim 1.

PAGE 153

LEVEL 1 - 139 OF 225 PATENTS

4,470,024

<=2> GET 1st DRAWING SHEET OF 2

Sep. 4, 1984

Integrated circuit for a controllable frequency oscillator

INVENTOR: Leuenberger, Claude-Eric, Chezard, Switzerland

... [*1] said insulating layer, said chip having an oxide layer, said insulating layer being a portion of said oxide layer.

[*2] 2. The chip of claim 1, wherein said first region is a bulk layer of the type of conductivity opposite to said one type of conductivity, said bulk layer being formed in said semiconductor substrate, and said second region is a

diffusion portion of said one type of conductivity ...
LEVEL 1 - 140 OF 225 PATENTS

PAGE 154

4,451,843

<=2> GET 1st DRAWING SHEET OF 2

May 29, 1984

Bipolar transistor with a plurality of parallelly connected
base-collector junctions formed by plastic deformation of
the crystal lattice

INVENTOR: Dahlberg, Reinhard, Flein, Federal Republic of Germany

... [*1] emitter region on its opposite main face so as to form an
emitter-base p/n junction; the side surfaces of the ridges in the other
semiconductor plate, disc or chip have a highly doped surface layer with the
type of conductivity of the base region; both semiconductor discs are assembled,
by mechanical pressure, so that the ridges of the structured faces of both
plates, discs or chips cross and touch; and the surfaces of said ridges which
are in contact are connected ...

LEVEL 1 - 141 OF 225 PATENTS

PAGE 155

4,427,607

<=2> GET 1st DRAWING SHEET OF 6

Jan. 24, 1984

Device in an evaporative cooler

INVENTOR: Korsell, Lars E. R., Stockholm, Sweden

... [*4] telescopically received only in the corresponding top openings of
a similar contact body immediately therebelow.

[*5] 5. In an evaporative cooler including, a casing, at least one contact
body of the multi-layer type located in said casing and formed with channels
existing between the layers and which all are passed by air, and means for
supplying water to selected channels in said body from above the body, the
improvement comprising ...

LEVEL 1 - 142 OF 225 PATENTS

PAGE 156

4,422,627

<=2> GET 1st DRAWING SHEET OF 1

Dec. 27, 1983

Endless spring, such as ringspring

INVENTOR: Schmidt, Helmut, Munich, Neubiberg, Federal Republic of Germany
Ramm, Ulrich, Neubiberg, Federal Republic of Germany
Schroeder, Alexander, Ottobrunn, Federal Republic of Germany

... [*1] comprising a spring body having a plurality of layers (2, 3, 4) made of fiber compound materials and extending in parallel to said frame plane, said layers comprising a first layer type (2) in which fiber bundles are wound so that all the fibers extend unidirectionally in said first layer type and a second layer type (3, 4), each said second layer type comprising at least two plies (5, 6) in which the fibers extend in cross-over relationship relative to each other, said first layer type and said second layer type being arranged in alternate succession relative to each other.

[*2] 2. The endless spring of claim 1, wherein said second layer type comprises one layer more than said first layer type so that the second layer type forms outer surfaces parallel to said frame plane, and so that said first layer type forms inner layers interconnected by a second type layer between two neighboring first type layers.

[*3] 3. The endless spring of claim 1, wherein said plies (5, 6) of said second layer type (3, 4) comprise at least one first ply (5) with fibers extending in parallel and at 90° relative to said main load application direction, and at least one second ply (6) with fibers extending in a +/- 45° cross-over relationship relative to said main load application direction.

[*4] 4. The endless spring of claim 3, wherein each of said second layer type (3, 4) comprises said first and second plies (5, 6), wherein a second layer type (3) located internally of the spring between two first layer types (2) comprises at least two first plies (5) and a second ply (6) located between said two first plies (5), and wherein a second layer type (4) located externally of the spring comprises at least one first ply (5) and at least one second ply (6) located on the outside of the spring.

[*5] 5. The spring of claim 1, wherein each of said first layer type (2) comprises at least two fiber bundles.

[*6] 6. The spring of claim 1, wherein said plies of said second layer type are made of fibers of different materials.

[*7] 7. The spring of claim 1, wherein said fiber bundles of said first layer type (2) are made of fibers of different materials.

[*8] 8. The spring of claim 1, wherein said fiber bundles of said first layer type (2) and said plies of said second layer type (3, 4) are made of fibers of different materials.

Pat. No. 4422627, *8

[*9] 9. The spring of claim 1, further comprising adhesive layers (7) operatively interposed between said first and second layer types.

[*10] 10. The spring of claim 1, further comprising spring attachment means (8) operatively secured to said endless spring for applying a load to the spring, and wear resistant plate means (9) ...

... [*10] reducing the wear imposed by the attachment means on the spring.

[*11] 11. The spring of claim 10, wherein said plate means (9) are made of spring steel.

[*12] 12. The spring of claim 1, wherein said first and second layer types (2, 3, 4) form an endless loop having two straight legs extending in parallel to each other and two curved end portions operatively interconnecting said straight legs.

[*13] 13. The spring of ...
LEVEL 1 - 143 OF 225 PATENTS

4,419,310

<=2> GET 1st DRAWING SHEET OF 2

Dec. 6, 1983

SrTiO3 barrier layer capacitor

INVENTOR: Burn, Ian, Williamstown, Massachusetts
Neirman, Stephen M., Williamstown, Massachusetts

What is claimed is:

[*1] 1. A method for making an intergranular barrier layer type capacitor without heating in a reduced atmosphere comprising:

(a) preparing a ceramic start mixture consisting essentially of strontium, titanium and strontium-titanate donor compounds, said donors being ...

PAGE 159

LEVEL 1 - 144 OF 225 PATENTS

4,414,059

<=2> GET 1st DRAWING SHEET OF 3

Nov. 8, 1983

Far UV patterning of resist materials

INVENTOR: Blum, Samuel E., White Plains, New York
Brown, Karen H., Yorktown Heights, New York
Srinivasan, Rangaswamy, Ossining, New York

... [*7] final step thereof includes the treatment of said exposed portions of said substrate through said patterned resist layer to modify the characteristics of said exposed portions.

[*8] 8. A method for patterning resist layers of the type used in lithography processes, comprising the steps of:

depositing a layer of said resist on a substrate, and

irradiating selected areas of said resist layer with ultraviolet radiation having wavelengths less than 220 nm and an ...

LEVEL 1 - 145 OF 225 PATENTS

PAGE 160

4,411,539

<=2> GET 1st DRAWING SHEET OF 7

Oct. 25, 1983

Print element with plural type layers of varying thickness

INVENTOR: Iwata, Nobuo, Sagamihara, Japan
Hasegawa, Takashi, Hiratsuka, Japan

... [*1] by the hammer, and the vertical dimension of the character carried by the type member; such variance in thicknesses eliminating ghost printing caused by the undesired touching of the paper by the type member adjacent in layer to the type member struck by the member.

[*2] 2. A print element as claimed in claim 1, wherein the print element is formed in a form of a disc type print wheel including ...

LEVEL 1 - 146 OF 225 PATENTS

PAGE 161

4,405,533

<=2> GET 1st DRAWING SHEET OF 4

Sep. 20, 1983

Supply device for use with evaporative contact bodies

INVENTOR: Norback, Per, Lidingo, Sweden
Eriksson, Borje, Sigtuna, Sweden

We claim:

[*1] 1. A supply device for use in an evaporative contact body of the multi-layer type having gaps between the layers of the body to which water is supplied from above and air is supplied from below, said device comprising water supply pipes and means for forming jets of water and directing said water jets ...

PAGE 162

LEVEL 1 - 147 OF 225 PATENTS

Sep. 6, 1983

Boundary layer type semiconducting ceramic capacitors with high capacitance

INVENTOR: Mandai, Haruhumi, Nagaokakyo, Japan
Nishimura, Kunitaro, Youkaichi, Japan
Yamaguchi, Masami, Nagaokakyo, Japan

What we claim is:

[*1] 1. A boundary layer type semiconducting ceramic capacitor comprising a semiconducting ceramic body in which grain boundaries on crystal grains of the semiconducting ceramic body are insulated, characterized in that said semiconducting ceramic body has a composition ...

... [*1] consisting of Mn, Bi, Cu, Pb, B and Si, and that the maximum crystal grain present in the semiconducting ceramic body has a grain size ranging from 100 mu to 250 mu .

[*2] 2. The boundary layer type semiconducting ceramic capacitor according to claim 1 wherein said composition contains 0.02 to 0.2 mole % of Mn.

[*3] 3. The boundary layer type semiconducting ceramic capacitor according to claim 2 wherein Mn is present in at least one of the grain boundaries and the crystal grains.

[*4] 4. The boundary layer type semiconducting ceramic capacitor according to claim 1 wherein said composition further contains at least one of 0.05 to 0.5 mole % of SiO₂ and 0.02 to 0.2 mole % of Al₂O₃.

[*5] 5. The boundary layer type semiconducting ceramic capacitor according to claim 2 wherein said composition further contains at least one of 0.05 to 0.5 mole % of SiO₂ and 0.02 to 0.2 mole % of Al₂O₃.

[*6] 6. The boundary layer type semiconducting ceramic capacitor according to claim 2 wherein Mn is present in the crystal grains.

[*7] 7. The boundary layer type semiconducting ceramic capacitor according to claim 2 wherein Mn is present in the grain boundaries of the crystal grains, and wherein said grain boundaries of the crystal grains are insulated by Mn and at least one other insulating agent.

[*8] 8. The boundary layer type semiconducting ceramic capacitor according to claim 1 in which the amount of the main component is 98.1 to 99.88 mole %.

[*9] 9. The boundary layer type semiconducting ceramic capacitor according to claim 8 wherein Mn is present at at least one of the grain boundaries and the crystal grains.

[*10] 10. The boundary layer type semiconducting ceramic capacitor according to claim 9 wherein Mn is present at the crystal grains.

GE 163

Pat. No. 4403236, *10

[*11] 11. The boundary layer type semiconducting ceramic capacitor according to claim 10 wherein said composition further includes at least one of 0.05 to 0.5 mole % of SiO₂ and 0.02 to 0.2 mole % of Al₂O₃.

[*12] 12. The boundary layer type semiconducting ceramic capacitor according to claim 9 wherein said composition further includes at least one of 0.05 to 0.5 mole % of SiO₂ and 0.02 to 0.2 mole % of Al₂O₃.

[*13] 13. The boundary layer type semiconducting ceramic capacitor according to claim 8 wherein said main component is (Sr₁ - xBa[x])TiO₃.

[*14] 14. The boundary layer type semiconducting ceramic capacitor according to claim 1 wherein said main component is (Sr₁ - xBa[x])TiO₃.

PAGE 164

LEVEL 1 - 148 OF 225 PATENTS

4,397,886

<=2> GET 1st DRAWING SHEET OF 1

Aug. 9, 1983

Method for making a ceramic intergranular barrier-layer capacitor

INVENTOR: Neirman, Stephen M., Williamstown, Massachusetts
Burn, Ian, Williamstown, Massachusetts

What is claimed is:

[*1] 1. A method for making a ceramic intergranular barrier layer type capacitor comprising:

(a) preparing a ceramic start mixture consisting essentially of strontium, titanium, a strontium-titanate-donor and manganese, said donor being selected from large cations A, small ...

LEVEL 1 - 149 OF 225 PATENTS

4,386,135

May 31, 1983

Stable silicone-coated release liner for pressure-sensitive adhesive sheets

PAGE 165

INVENTOR: Campbell, Karen J., Anoka, Minnesota
Evans, Jack L., St. Paul, Minnesota

... [*1] hydrogen in (2) to silicon-bonded ethylenically unsaturated radicals in (1) being from 1:1 to 20:1.

[*2] 2. The release liner of claim 1 wherein each side of the base sheet is provided with a silicone layer of the type defined.

[*3] 3. The release liner of claim 1 wherein R and R<1 > are both methyl.

[*4] 4. The release liner of claim 1 wherein R<2 > is a vinyl radical.

[*5] 5. The release liner of claim ...
LEVEL 1 - 150 OF 225 PATENTS

4,363,997

<=2> GET 1st DRAWING SHEET OF 2

Dec. 14, 1982

Fluorescent lamp having reflective layer

INVENTOR: Kodama, Churyo, Ohme, Japan

What is claimed is:

[*1] 1. A fluorescent lamp of the reflective layer type comprising a glass tube, a first phosphor layer formed on the entire face of the inner wall of said glass tube and a second phosphor layer formed on said first phosphor layer at ...

... [*1] m and the average particle size of the phosphor constituting said first phosphor layer is smaller than the average particle size of the phosphor constituting said second phosphor layer.

[*2] 2. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the average particle size of the phosphor constituting the first phosphor layer is smaller than 10 mu m.

[*3] 3. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the average particle size of the phosphor constituting the second phosphor layer is smaller than 30 mu m.

[*4] 4. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein each of the amounts coated of the phosphors of the first and second phosphor layers is 2 to 4 mg/cm<2> .

[*5] 5. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the reflection angle is in the range of 180oto 240o.

[*6] 6. A fluorescent lamp of the reflective layer type as set forth in claim 5, wherein the reflection angle is 180°.

[*7] 7. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the phosphor constituting the first phosphor layer has the same light emission spectrum as that of the phosphor constituting the second phosphor layer.

[*8] 8. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the phosphor constituting the first phosphor layer has a light emission spectrum different from that of the phosphor constituting the second phosphor layer.

[*9] 9. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the glass tube is a straight tube.

[*10] 10. A fluorescent lamp of the reflective layer type as set forth in claim 1, wherein the glass tube is a circular or curved tube.
167

LEVEL 1 - 151 OF 225 PATENTS

4,363,769

<=2> GET 1st DRAWING SHEET OF 8

Dec. 14, 1982

Method for manufacturing thin and flexible ribbon wafer of semiconductor material and ribbon wafer

INVENTOR: Tsuya, Noboru, 1-38, Kashiwagi 2-Chome, Sendai City, Japan
Arai, Kenichi, Sendai, Japan

... [*18] extending parallel to a moving direction of the ejected melt so that at least two jet flows of some or different semiconductor material are simultaneously ejected through the holes so as to form a thin ribbon wafer or multi-layer type.

[*19] 19. A method as defined in claim 1, wherein the raw semiconductor material is mixed with a substance selected from the group consisting of Ge, Si, Se, Te, PbS, InSb, ZnSe, PbSe, ...

PAGE 168

LEVEL 1 - 152 OF 225 PATENTS

4,362,597

<=2> GET 1st DRAWING SHEET OF 1

Dec. 7, 1982

Method of fabricating high-conductivity
silicide-on-polysilicon structures for MOS devices

INVENTOR: Fraser, David B., Berkeley Heights, New Jersey
Kinsbron, Eliezer, Highland Park, New Jersey
Vratny, Frederick, Berkeley Heights, New Jersey

... [*1] containing layer on top of said pattern and on said selected regions, the metallic constituent in said layer being selected from the group consisting of titanium, tantalum, molybdenum, tungsten, nickel and cobalt, which metal-containing layer is of the type that, upon sintering, will form a silicide,

lifting off said pattern thereby leaving on said device only the metal-containing layer deposited on said selected regions,

sintering said remaining metal- ...

... [*4] top of said masking pattern and on said selected surface regions, the metallic constituent in said layer being selected from the group consisting of titanium, tantalum, molybdenum, tungsten, nickel and cobalt, which metal-containing layer is of the type that, upon sintering, will form a silicide,

removing said masking pattern from said polysilicon layer thereby lifting off those portions of said metal-containing layer deposited on top of said masking pattern and ...

... [*5] masking pattern and on said surface regions of said polysilicon layer, the metallic constituent in said layer being selected from the group consisting of titanium, tantalum, molybdenum, tungsten, nickel and cobalt, which metal-containing layer is of the type that, upon sintering, will form a silicide,

removing said masking pattern from said intermediate layer thereby lifting off those portions of said metal-containing layer deposited on top of said masking pattern and ...

PAGE 169

LEVEL 1 - 153 OF 225 PATENTS

4,362,158

<=2> GET 1st DRAWING SHEET OF 2

Dec. 7, 1982

Synthetic bag-type container for human blood and its
fractions, perfusion solutions, dialysis solutions and
alimentary and chemical liquids in general

INVENTOR: Lena, Paolo, Via Castello, 13, 26038 Torre de'Picenardi (Cremona),
Italy

... [*3] two parallel side edges of the container.

[*4] 4. A container as claimed in claim 1, particularly for containing solutions and liquids in general, wherein said initial film sheet is of the single-layer type, and is constituted by polyethylene-butyl rubber copolymer, polyethylene or polypropylene.

[*5] 5. A container as claimed in claim 1, wherein the initial film sheet has a thickness of 80-150 microns.

[*6] 6. ...

PAGE 170

LEVEL 1 - 154 OF 225 PATENTS

4,360,819

<=2> GET 1st DRAWING SHEET OF 4

Nov. 23, 1982

Thermal recording apparatus

INVENTOR: Saito, Tamio, Oume, Japan
Fukumoto, Yoshikatsu, Hamura, Japan
Tagaya, Kiyomi, Oume, Japan

... [*5] respective switching group and capable of limiting the switching operation of said respective switching group.

[*6] 6. A thermal recording apparatus according to claim 1, wherein said capacitor is an electrolytic capacitor of an electric double layer type construction.

[*7] 7. A thermal recording apparatus according to claim 1, wherein said detecting means comprises two serially connected resistors in parallel with said capacitor; and a comparator means, coupled to ...

... [*11] signals stored in said memory when the detected terminal voltage is less than the predetermined voltage.

[*12] 12. A thermal recording apparatus according to claim 10, wherein said capacitor is an electrolytic capacitor of electric double layer type construction.

PAGE 171

LEVEL 1 - 155 OF 225 PATENTS

4,352,116

<=2> GET 1st DRAWING SHEET OF 7

Sep. 28, 1982

Solid state electro-optical devices on a semi-insulating substrate

INVENTOR: Yariv, Amnon, San Marino, California
Margalit, Shlomo, Pasadena, California
Lee, Chien-Ping, Pasadena, California

... [*15] matching parameters, with adjacent semi-conductor layers having different combinations of constituent elements and being of either of the N or P type, each of said layers including a region which is doped to a type opposite the layers's type whereby a PN junction is formed in the second layer; and

a first and second contacts on the top surface of the top third layer, said first contact being on the surface which is not doped and the second contact on the ...
PAGE 172

LEVEL 1 - 156 OF 225 PATENTS

4,341,686

Jul. 27, 1982

Adhesive products and a process for their use in polyurethanes

INVENTOR: Chakrabarti, Sarbananda, Ludwigshafen, Federal Republic of Germany
Hutchison, John, Wachenheim, Federal Republic of Germany
Volkert, Otto, Weisenheim, Federal Republic of Germany

... [*6] by weight of a solvent mixture of cyclohexanone/methylene chloride in a weight ratio of approximately 50:50.

[*7] 7. A process for improving the adhesiveness of cellular or noncellular polyurethanes to solid cover layers of all types wherein the improvement comprises treating the cover layers with an adhesive product comprising, based on the total weight,

- (a) 1 to 10 percent by weight of an aminoalkyltrialkoxysilane,
- (b) 1 to 20 percent by weight of a ...

PAGE 173

LEVEL 1 - 157 OF 225 PATENTS

4,337,216

<=2> GET 1st DRAWING SHEET OF 6

Jun. 29, 1982

Device in an evaporative cooler

INVENTOR: Korsell, Lars E. R., Stockholm, Sweden

... [*1] socket being telescopically inserted only into another single corresponding opening in an adjacent contact body.

[*2] 2. In an evaporative cooler including, a casing, at least one contact body of the multi-layer type located in said casing and formed with channels existing between the layers and which all are passed by air, and means for supplying water to selected channels in said body from above the body, the improvement comprising ...

PAGE 174

LEVEL 1 - 158 OF 225 PATENTS

4,305,670

Dec. 15, 1981

Liquid mixing device

INVENTOR: Moskowitz, Paul M., Brooklyn, New York
Rushansky, Yuliy, Bronx, New York

... [*1] surfaces of said disk extending in a plane perpendicular to the axis of rotation of said other shaft and being located symmetrically around said shaft,

said disk serving as a boundary layer type rotor in which boundary layer effects will occur along the surfaces of said disk during rotation of s disk, said boundary layer effect causing liquid to move in a downward, ...
PAGE 175

LEVEL 1 - 159 OF 225 PATENTS

4,288,992

<=2> GET 1st DRAWING SHEET OF 4

Sep. 15, 1981

Curtain for open front freezer or refrigerator

INVENTOR: Eliason, Carlyle R., 905 W. Inkster, Kalamazoo, Michigan 49008

... [*16] flexible sheet curtain being extendible across said access opening near at least one of said strip curtain and said air curtain means to the opposite wall of said cabinet to form an air layer-type thermal barrier between said flexible sheet and strips when access to said access opening is not required.

[*17] 17. The apparatus of claim 15, in which said upper front wall portion of said cabinet is ...

PAGE 176

LEVEL 1 - 160 OF 225 PATENTS

4,287,249

Sep. 1, 1981

Textured surface polypropylene film

INVENTOR: Eustance, John W., So. Glens Falls, New York
Hobbs, Stanley Y., Scotia, New York
Carley, Emilie L., Hartford, New York

... [*1] properties for dielectric fluids which comprises a thin polypropylene film having one predetermined textured surface which is coextensively and uniformly covered by an overlapping pattern of fibroid irregularities comprising predominantly a stretched layer of Type I and Type II polypropylene crystal structure, and said film being characterized by a space factor of greater than about 5% and a haze measurement of greater than about 20%.

[*2] 2. The film of ...
LEVEL 1 - 161 OF 225 PATENTS

4,265,386

May 5, 1981

Torsional fluid damper system

INVENTOR: Levy, Avner, Irvine, California
Karsh, Irving, Costa Mesa, California

... [*12] a loop having a bight portion extending in contact with said circumferential wall of said container.

[*13] 13. In a torsional fluid damper of the inertial mass and viscous fluid friction boundary layer type having a frequency response in the kHz region, the improvement comprising in combination:

means for containing an inertial mass and viscous fluid friction boundary layer comprising a rotatable container having an internal ...

LEVEL 1 - 162 OF 225 PATENTS

4,252,417

Feb. 24, 1981

Liquid crystal display

INVENTOR: Scheffer, Terry J., Forch, Switzerland
Zeller, Hans R., Birr, Switzerland

What is claimed as new and desired to be secured by Letters Patent of the United States is:

[*1] 1. A liquid crystal display comprising:

two parallel plates having inside surfaces on which are formed layer-type electrodes and between which is disposed a liquid crystal mixture to form a liquid crystal cell, said plates having outside surfaces on which no polarizers are disposed;

said liquid crystal mixture comprising primarily ...
LEVEL 1 - 163 OF 225 PATENTS

4,243,708

<=2> GET 1st DRAWING SHEET OF 4

Jan. 6, 1981

Metallized textured surface polypropylene film

INVENTOR: Eustance, John W., South Glens Falls, New York
Hobbs, Stanley Y., Scotia, New York
Carley, Emilie L., Hartford, New York

... [*1] properties for dielectric fluids which comprises a thin polypropylene film having one predetermined textured surface which is coextensively and uniformly covered by an overlapping pattern of fibroid irregularities comprising predominantly a stretched layer of Type I and Type II crystal structure, said film being characterized by a space factor of greater than about 5% and a haze measurement of greater than about 20%, and said film having an electrically ...

LEVEL 1 - 164 OF 225 PATENTS

4,231,754

Nov. 4, 1980

Chemiluminescent analytical device

INVENTOR: Vogelhut, Paul O., Mishawaka, Indiana

... [*4] a photoresponsive layer in contact with at least one surface of said second layer which is in contact with the first layer.

[*5] 5. The test device of claim 4 wherein the photoresponsive layer is a photoresponsive imaging layer of the type which is permanently transformed by exposure to a light response in proportion to the amount of light emitted.

[*6] 6. A method for determination of a constituent in a sample which comprises contacting the sample with the ...

PAGE 181

LEVEL 1 - 165 OF 225 PATENTS

4,229,095

<=2> GET 1st DRAWING SHEET OF 3

Oct. 21, 1980

Electro-optical color imaging apparatus

INVENTOR: Mir, Jose M., Webster, New York

... [*5] produced so that the pixels of each successive strip are concurrently subjected to light of said different colors, sequentially and according to an image to be produced.

[*6] 6. Electro-optical color imaging apparatus for use with an imaging layer of the type which can record different light colors, said apparatus comprising:

(a) means for disposing such an imaging layer in an imaging station of said apparatus;

(b) a plurality of discrete electro-optical ...

PAGE 182

LEVEL 1 - 166 OF 225 PATENTS

4,228,581

<=2> GET 1st DRAWING SHEET OF 1

Oct. 21, 1980

Method for producing semiconductor bodies having a defined edge profile which has been obtained by etching and is covered with a glass

INVENTOR: Chadda, Madan M., Nurnberg-Gaulnhofen, Federal Republic of Germany
Maier, Reinhold, Nuremberg, Federal Republic of Germany

... [*1] for producing semiconductor bodies having a glass-covered defined edge profile, said semiconductor bodies being obtained by etching from a large-area semiconductor basic wafer having a sequence of layer-type zones of different conductivity type with at least one pn-junction and a surface oxide layer thereon, the steps comprising

applying a etch-resistant protective coating onto said surface oxide layer, cutting ...

PAGE 183

LEVEL 1 - 167 OF 225 PATENTS

Sep. 16, 1980

Reduction of sparkle noise and mottling in CCD imagers

INVENTOR: Levine, Peter A., Trenton, New Jersey

... [*4] B register responsive to applied multiple phase voltages for the storage in and transfer of charge along the channels of said B register;

said electrodes of said A and B registers being of the single layer type and comprising semiconductor material of one conductivity type and being separated from one another by "gaps" formed of semiconductor material of opposite conductivity type; and

a control electrode insulated from the electrodes of the A register and ...
PAGE 184

LEVEL 1 - 168 OF 225 PATENTS

Jun. 3, 1980

Reduction of sparkle noise in CCD imagers

INVENTOR: Levine, Peter A., Trenton, New Jersey

... [*1] direction over the channels of said B register responsive to applied multiple phase voltages for the storage in and transfer of charge along the channels of said B register, said electrodes being of the single layer type and comprising semiconductor material of one conductivity type and being separated from one another by semiconductor material of opposite conductivity type;

a CCD C register including a semiconductor formed with a ...
185

LEVEL 1 - 169 OF 225 PATENTS

Jul. 10, 1979

Method of manufacturing a coalescing demister

INVENTOR: Berger, Jr., L. Joseph, Birmingham, Michigan
Guequierre, Denis D., Birmingham, Michigan

... [*4] said cloth into place, thereby forming an anti-migration filter layer.

[*5] 5. The method described in claim 4, and including the step of placing a screen type retainer inside said anti-migration layer of the type adapted to assert pressure on said anti-migration and said drain layers and keep them in intimate contact with one another and with said inner retainer.

[*6] 6. The method described in claim 5, and including the ...

... [*8] said cloth into place thereby forming an anti-migration filter layer.

[*9] 9. The method described in claim 8, and including the step of placing a screen-type retainer inside said anti-migration layer of the type adapted to assert pressure on said anti-migration and said drain layers and keep them in intimate contact with one another and with said inner coalescer retainer.

[*10] 10. The method described in claim 9, and ...
LEVEL 1 - 170 OF 225 PATENTS

4,150,186

<=2> GET 1st DRAWING SHEET OF 2

Apr. 17, 1979

Composite board structure and a method of and an apparatus
for producing the board structure

INVENTOR: Kazama, Norio, Yokohama, Japan

... [*7] copolymers, and ethylene-vinyl acetate copolymers.

[*8] 8. A composite board structure as set forth in claim 1, in which the respective thermoplastic adhesive materials forming said first and second layers are of the types which are homogeneous to each other.

[*9] 9. A composite board structure as set forth in claim 1, having a three-dimensionally curved portion.

LEVEL 1 - 171 OF 225 PATENTS

4,137,077

<=2> GET 1st DRAWING SHEET OF 1

Jan. 30, 1979

Broadening the spatial frequency pass band of a thermoplastic layer

INVENTOR: Credelle, Thomas L., East Windsor, New Jersey
Hannan, William J., Palm Beach Gardens, Florida
Spong, Fred W., Lawrenceville, New Jersey

... [*1] first and second surfaces respectively connected to a surface of a substrate and to one surface of a photoconductor layer that is adapted to receive an interference pattern of light representative of an image, the improvement comprising a thermoplastic layer of the type that has a frost frequency inversely related to thickness, said thermoplastic layer having a surface with undulations that cause said thermoplastic layer to have a multiplicity of frost frequencies, said undulations having a spatial frequency ...

... [*4] less than 100 cycles per millimeter.

[*5] 5. In a holographic recording medium wherein one surface of an electrically conductive layer is connected to a surface of a substrate, the improvement comprising a photoplastic layer of the type that has a frost frequency inversely related to thickness, said photoplastic layer having a surface with undulations that cause said photoplastic layer to have a multiplicity of frost frequencies, said undulations having a spatial frequency ...

PAGE 188

LEVEL 1 - 172 OF 225 PATENTS

4,135,291

<=2> GET 1st DRAWING SHEET OF 2

Jan. 23, 1979

Method for producing semiconductor devices with high reverse blocking capability

INVENTOR: Tursky, Werner, Schwabach, Eichvasen, Federal Republic of Germany
Chadda, Madan, Nuremberg-Gaulnhofen, Federal Republic of Germany
Schafer, Horst, Zirndorf, Federal Republic of Germany

... [*1] method for producing a plurality of semiconductor devices out of a semiconductor disc of a first conductivity type with the devices having a high reverse blocking capability and having a sequence of at least three layer-type zones of different conductivity types, of which at least one is highly resistive, and at least one pn-junction, comprising the steps of:

forming grooves of a depth at least equal to the desired thickness of the highly resistive zone ...

... [*1] said disc into sections of smaller areal expanse capable of being separated into individual semiconductor device containing wafers;

thereafter subjecting the disc to a diffusion process to produce a sequence of at least three layer-type zones of different conductivity which form at least one pn-junction in each said section, and a zone of a single conductivity type which passes through the entire disc in the profile region of ...

... [*2] a diffusion process includes diffusing an impurity which forms a zone of the opposite conductivity type into both major surfaces of said disc to provide, in each said section, a sequence of three layer-type zones of alternating conductivity types with the zones adjacent both major surfaces being of said opposite conductivity type and an inner zone of said first conductivity type, and to provide a zone of said opposite ...

LEVEL 1 - 173 OF 225 PATENTS

4,120,700

<=2> GET 1st DRAWING SHEET OF 2

Oct. 17, 1978

Method of producing p-n junction type elements by ionized
cluster beam deposition and ion-implantation

INVENTOR: Morimoto, Kiyoshi, Mobara, Japan

... [*1] substrate electrode being formed of a metal film such as can produce an ohmic contact with the semiconductor layer of the one impurity type;

ionizing impurity atoms such as can form a semiconductor layer having the type of conductivity opposite to that of the semiconductor layer of the one impurity type;

accelerating the impurity ions by giving them kinetic energies;

implanting the impurity ions in the semiconductor layer of the one impurity type to form an ion- ...

... [*2] substrate electrode being formed of a metal film such as can produce an ohmic contact with the semiconductor layer of the one impurity type;

ionizing impurity atoms such as can form a semiconductor layer having the type of conductivity opposite to that of the semiconductor layer of the one impurity type;

accelerating the impurity ions by giving them kinetic energies;

implanting the impurity ions in the semiconductor layer of the one impurity type to form an ion- ...

... [*3] substrate electrode being formed of a metal film such as can produce an ohmic contact with the semiconductor layer of the one impurity type;

ionizing impurity atoms such as can form a semiconductor layer having the type of conductivity opposite to that of the semiconductor layer of the one impurity type;

accelerating the impurity ions by giving them kinetic energies;

implanting the impurity ions in the semiconductor layer of the one impurity type to form an ion- ...

... [*4] substrate electrode being formed of a metal film such as can produce an ohmic contact with the semiconductor layer of the one impurity type;

ionizing impurity atoms such as can form a semiconductor layer having the type of conductivity opposite to that of the semiconductor layer of the one impurity type;

Pat. No. 4120700, *4

accelerating the impurity ions by giving them kinetic energies;

implanting the impurity ions in the semiconductor layer of the one impurity type to form an ion- ...

LEVEL 1 - 174 OF 225 PATENTS

4,119,142

<=2> GET 1st DRAWING SHEET OF 2

Oct. 10, 1978

Arrangement for transferring heat from the exhaust air
leaving an enclosed volume to the input air supplied to said
volume

INVENTOR: Margen, Peter Heinrich Erwin, Nykoping, Sweden

... [*1] circuit, arranged in said supply conduit, a second heat exchanger in said circuit, arranged in said exhaust conduit, the improvement comprising a heat store of the stratified liquid-layer type, the hot side of which is coupled to the hot side of the circuit and the cold side of which is coupled to the cold side of said circuit, valve means for deflecting part of the hot circuit liquid into said store during normal ...

... [*2] least one by-pass line arranged in said circuit in parallel with said second heat exchanger;

means for controlling the liquid flow through said second heat exchanger; and,

layer type heat store means for supplying heat to said first heat exchanger in the form of heat extracted from said exhaust air, while said second heat exchanger is disconnected for defrosting, having the ...

LEVEL 1 - 175 OF 225 PATENTS

4,096,389

<=2> GET 1st DRAWING SHEET OF 5

Jun. 20, 1978

Apparatus for minimizing radiation exposure and improving resolution in radiation imaging devices

INVENTOR: Ashe, John B., Palatine, Illinois
Williams, Gwilym H., Palatine, Illinois
Sypal, Kenneth L., Glen Ellyn, Illinois

... [*6] improvement as defined in claim 1, wherein said sandwich assembly comprises a plurality of substantially equally spaced concentric cylindrical layers of alternating attenuation and spacing material, each said respective layer type being substantially uniform in length and in thickness, whereby a circular beam pattern is produced.

[*7] 7. The improvement as defined in claim 1, wherein said sandwich assembly comprises a layer of ...

LEVEL 1 - 176 OF 225 PATENTS

4,092,663

<=2> GET 1st DRAWING SHEET OF 2

May 30, 1978

Semiconductor device

INVENTOR: Schafer, Horst, Zirndorf-Nuremberg, Germany, Federal Republic of

I claim:

[*1] 1. In a semiconductor device with a high blocking capability comprising a semiconductor wafer having at least two layer type zones of alternatingly opposite conductivity type and different doping concentrations and forming a pn junction therebetween which intersects the edge surface of the semiconductor wafer, the higher doped of said at least two zones forming ...

PAGE 194

LEVEL 1 - 177 OF 225 PATENTS

4,087,159

<=2> GET 1st DRAWING SHEET OF 15

May 2, 1978

Self imaging system using a waveguide

INVENTOR: Ulrich, Reinhard, Leonberg-Silberberg, Germany, Federal Republic of

... [*24] provided at an input window (E1) in FIG. 31) taking up the one half of the input surface of the waveguide.

[*25] 25. An imaging system according to claim 24, characterized by the feature that the waveguide is a layer type waveguide, which has a different thickness in the region (PS) of the input window (E1) than in the other regions.

[*26] 26. An imaging system according to claim 24, characterized by the feature that the phase shift device (...

LEVEL 1 - 178 OF 225 PATENTS

4,084,863

<=2> GET 1st DRAWING SHEET OF 1

Apr. 18, 1978

Bearing and bearing liner having a compliant layer

INVENTOR: Capelli, Alfred J., Palos Verdes Peninsula, California

... [*1] height of the projection on the substrate.

[*2] 2. In a bearing including a substrate having an irregular surface and further including a thin and deformable wear resistant layer having a wear surface wherein the wear resistant layer is of the type which would be deformed by the irregular surface of the substrate upon loading of the wear resistant layer against the irregular surface, the wear resistant layer including a porous backing member and particles of a lubricant ...

LEVEL 1 - 179 OF 225 PATENTS

4,037,244

<=2> GET 1st DRAWING SHEET OF 2

Jul. 19, 1977

Avalanche photodiode

INVENTOR: de Cremoux, Baudouin, Paris, France

... [*4] 3, wherein the thickness of the third layer is sufficiently thin to be transparent to the radiation, the radiation being absorbed in the first layer.

[*5] 5. A diode as claimed in claim 4, wherein said first layer has type n-conductivity, said second and third layers having type p-conductivity, the first layer having a doping concentration of the order of $10^{16} > \text{at/cm}^3$,

said second and said third layers having doping concentrations of the order of $10^{19} > \text{at/cm}^3$, the thickness of the ...

... [*6] 3, wherein said third layer is sufficiently thick to absorb the radiation to be detected.

[*7] 7. A diode as claimed in claim 6, wherein the first layer has p-type conductivity, the second and third layers have type n-conductivity, the doping concentrations being of the order of $10^{18} > \text{at/cm}^3$ and $10^{16} > \text{at/cm}^3$, respectively.

[*8] 8. A diode as claimed in claim 1, wherein the layers are made of ...
PAGE 197

LEVEL 1 - 180 OF 225 PATENTS

4,019,843

<=2> GET 1st DRAWING SHEET OF 4

Apr. 26, 1977

Film blowhead for producing tubular film

INVENTOR: Zimmermann, Werner Josef, Lengerich of Westphalia, Germany

... [*3] in each of said pairs disposed in a common radial plane and with the radial planes in parallel relationship.

[*4] 4. A film blowhead according to claim 1 wherein the film blowhead is of multi-layer type and wherein said air inlet and outlet tubes are disposed between said axial passage portions of said distributing passages in at least one radial plane.

LEVEL 1 - 181 OF 225 PATENTS

4,015,034

<=2> GET 1st DRAWING SHEET OF 2

Mar. 29, 1977

Register for index marking article

INVENTOR: Smolen, Benjamin Edward, 1501 Broadway, New York, New York 10036

... [*2] said carrier includes an adhesive surface on the face opposite said release surface for securing said carrier to a said sheet.

[*3] 3. Article in accordance with claim 1 wherein said adhesive layer is of the type having an initial low tack which is rendered highly adherent responsive to localized high pressure such as exerted by a stylus scanned in registry therewith.

4. Article in accordance with claim 3 wherein said ...

LEVEL 1 - 182 OF 225 PATENTS

4,012,817

<=2> GET 1st DRAWING SHEET OF 1

Mar. 22, 1977

Method of making a capacitor

INVENTOR: Preissinger, Karl-Heinz, Taufkirchen, Germany, Federal Republic of
Wehnelt, Ulrich, Starnberg, Germany, Federal Republic of

We claim as our invention:

[*1] 1. A method for producing a layer type capacitor comprising the steps
of

coating an adhesion-imparting layer in a dissolved state onto a first
covering foil,

applying a first conductive layer with pores therein into the exposed surface
of said adhesion- ...

... [*1] sides by pressing heated leads at least at one point through said

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covering foil and the respective of said layers into said first covering foil.

[*2] 2. A method for producing a layer type capacitor in accordance with claim 1 wherein the hardening glue is added to the adhesion-imparting layer in a concentration which does not prevent activation of said adhesion-imparting layer by penetration of the dielectric solvent ...

PAGE 200

LEVEL 1 - 183 OF 225 PATENTS

3,969,232

<=2> GET 1st DRAWING SHEET OF 1

Jul. 13, 1976

Bearing and bearing liner wear resistant compliant layer

INVENTOR: Turner, Peter H., Burbank, California

... [*2] mixture including the adhesive.

[*3] 3. In a bearing including a substrate having an irregular surface,

a first thin wear resistant layer having a first wear surface wherein the first wear resistant layer is of the type which would be deformed by the irregular surface of the substrate upon loading of the first wear resistant layer against the irregular surface, the first wear resistant layer including a first porous backing member and ...

LEVEL 1 - 184 OF 225 PATENTS

3,958,484

<=2> GET 1st DRAWING SHEET OF 1

PAGE 201

May 25, 1976

Sealing means for wind instruments

INVENTOR: Nelson, Robert E., Los Angeles, California
Gilbert, Robert D., Los Angeles, California

... [*4] layer.

[*5] 5. In the sealing means of claim 4 wherein said first layer is Volara material and said second layer is Volite material.

[*6] 6. In the sealing means of claim 5 wherein said first layer is Type A Volara material.

[*7] 7. In the sealing means of claim 6 wherein a third layer of material having indicia thereon is adhered to said second layer, said third layer being fixedly secured to said ...

... [*12] first layer is laminated to said second layer.

[*13] 13. The pad of claim 12 wherein said first layer is Volara material and the second layer is Volite material.

[*14] 14. The pad of claim 13 wherein said first layer is Type A Volara material.

[*15] 15. The pad of claim 14 wherein a third layer of material having indicia thereon is adhered to said second layer.

LEVEL 1 - 185 OF 225 PATENTS

3,956,624

<=2> GET 1st DRAWING SHEET OF 2

May 11, 1976

Method and device for the storage and multiplication of
analog signals

INVENTOR: Audaire, Luc, St-Nizier-du-Moucherotte, France
Borel, Joseph, Echirolles, France
LE Goascoz, Vincent, Claix, France
Poujois, Robert, Grenoble, France

... [*1] ordered series is derived from the sampling of a function, wherein a multiplication of two corresponding terms is performed by recording the signal which is proportional to one sample of said function in a memory of the multiple dielectric layer type and by applying a given voltage to the gate of said transistor so as to generate a signal which is a linear function of the threshold voltage which is in turn a linear function of the writing signal at

the input of ...

PAGE 203

LEVEL 1 - 186 OF 225 PATENTS

3,949,463

<=2> GET 1st DRAWING SHEET OF 2

Apr. 13, 1976

Method of applying an anti-reflective coating to a solar cell

INVENTOR: Lindmayer, Joseph, Bethesda, Maryland
Allison, James F., Silver Springs, Maryland

... [*1] as a solar cell, an anti-reflective coating and a desired pattern of a metal electrode for current collection, comprising the steps of:

a. coating said surface with a first metal layer of the type which can be oxidized to form said anti-reflective coating,

b. forming on top of said coating a metal electrode having said desired pattern, said first metal layer having parts thereof exposed which are ...

PAGE 204

LEVEL 1 - 187 OF 225 PATENTS

3,939,642

<=2> GET 1st DRAWING SHEET OF 4

Feb. 24, 1976

Electronic timepiece semiconductor integrated circuit

INVENTOR: Morozumi, Shinji, Nagano, Japan

... [*4] substrate is formed of a material selected from the group consisting of sapphire, spinel, silicon oxide or titanium oxide.

[*5] 5. An electronic timepiece as claimed in claim 3 wherein the P-channel transistors are depletion-layer type transistors and the N-channel transistors are reverse-layer type transistors.

[*6] 6. An electronic timepiece as claimed in claim 3, wherein said P-channel and N-channel transistors are reverse-layer channel transistors.

[*7] 7. An electronic timepiece as claimed in ...

LEVEL 1 - 188 OF 225 PATENTS

3,936,730

<=2> GET 1st DRAWING SHEET OF 1

PAGE 205

Feb. 3, 1976

Insulation test apparatus including improved means for simultaneous display

INVENTOR: Pittman, Paul F., Pittsburgh, Pennsylvania

... [*3] branches is a current transformer and said means for displaying signals is an oscilloscope.

[*4] 4. The subject matter of claim 2 wherein:

said switching means comprises a plurality of semiconductor switching devices of the four layer type connected in a series string and provided with means to trigger said series string to conduction to effect discharge of said capacitor.

[*5] 5. The subject matter of claim 1 wherein:

said means for displaying ...
LEVEL 1 - 189 OF 225 PATENTS

3,930,903

<=2> GET 1st DRAWING SHEET OF 1

Jan. 6, 1976

Stabilized superconductive wires

INVENTOR: Randall, Robert N., Wayland, Massachusetts
Wong, James, Wayland, Massachusetts

What is claimed is:

[*1] 1. Superconductive multi-filament wire product comprising, means defining a copper matrix with a plurality of spaced filaments therein, each of the filaments comprising a layer therein of type II superconducting intermetallic compound of Beta-Wolfram structure, being the diffusion reaction product of source filaments comprising a cross-section multilayer configuration of a refractory metal layer each containing ...
LEVEL 1 - 190 OF 225 PATENTS

3,929,849

<=2> GET 1st DRAWING SHEET OF 1

Dec. 30, 1975

Tetraalkyl phosphonium aluminosilicates

INVENTOR: Oswald, Alexis A., Mountainside, New Jersey

What is claimed is:

- [*1] 1. Tetra-alkyl phosphonium clays of layer and chain type structure.
- [*2] 2. Tetra-alkyl phosphonium clays of layer type structure.
- [*3] 3. The compositions of claim 2 wherein said layer type clay is a montmorillonite.
- [*4] 4. Tetra-alkyl phosphonium clays of the formula [R₄P +] Clay - wherein R is a C1 to C100 aliphatic hydrocarbyl group, and the clay is a negatively charged aluminosilicate of layer and chain ...
- ... [*8] C1 to C7 low aliphatic groups and C8 to C100 high aliphatic groups in such a manner that if R' is low, R" should be high and the reverse; Clay - is a negatively charged layered aluminosilicate of layer type structure.
- [*9] 9. The composition of claim 8 wherein the high aliphatic groups equal C8 to C40 alkyl and the low C1 to C7 aliphatic groups are selected from the group consisting of alkyl, alkenyl and alkynyl.

[*10] 10. The composition of ...
LEVEL 1 - 191 OF 225 PATENTS

3,922,777

<=2> GET 1st DRAWING SHEET OF 1

Dec. 2, 1975

Process for the production of layer circuits with conductive layers on both sides of a ceramic substrate

INVENTOR: Weitze, Artur, Pullach, Germany, Federal Republic of
Leskovar, Peter, Munich, Germany, Federal Republic of

We claim as our invention:

- [*1] 1. A process for the production of layer-type printed circuits having conductive layers on both sides of a ceramic substrate which comprises providing an aperture in a green ceramic substrate, inserting into said aperture, a high melting metal pin having ...

LEVEL 1 - 192 OF 225 PATENTS

3,922,567

<=2> GET 1st DRAWING SHEET OF 5

Nov. 25, 1975

Integrated IGFET bucket-brigade circuit

INVENTOR: Adam, Fritz G., Freiburg, Germany, Federal Republic of
Obermeier, Cornelius, Freiburg, Germany, Federal Republic of
Scheffer, Gerhard, Denzlingen, Germany, Federal Republic of
Wilmsmeyer, Klaus, Denzlingen, Germany, Federal Republic of

... [*1] sources of clock pulses, said first source coupled to said even-numbered transistors and said second source coupled to said odd-numbered transistors; and

a row of field-effect transistors of the depletion-layer type having source and drain regions, said field-effect transistors employing gate electrodes on an insulated-gate layer, wherein the last transistor in said row is provided with an electrical terminal to which said source of operating voltage is ...

PAGE 210

LEVEL 1 - 193 OF 225 PATENTS

3,910,802

<=2> GET 1st DRAWING SHEET OF 1

Oct. 7, 1975

Stabilized superconductors

INVENTOR: Wong, James, Wayland, Massachusetts

What is claimed is:

[*1] 1. Superconductive multi-filament wire product comprising, means defining a bronze matrix with a plurality of spaced filaments therein,

each of the filaments comprising a layer of type II superconducting intermetallic compound of Beta-Wolfram structure being the diffusion reaction product of a first elemental component derived from said bronze matrix and of a second elemental component derived from source ...

LEVEL 1 - 194 OF 225 PATENTS

3,895,336

<=2> GET 1st DRAWING SHEET OF 1

Jul. 15, 1975

Transformer core with composite offset V-miter and step joint

INVENTOR: Pitman, Frank A., Rome, Georgia

I claim:

[*1] 1. In a transformer core of the stacked flat-layer type having a plurality of flat, laminated, layered members of equal width, each of said members including:
two generally rectangular shaped, parallel, spaced-apart, outside leg members beveled at each end;

...

PAGE 212

LEVEL 1 - 195 OF 225 PATENTS

3,895,335

<=2> GET 1st DRAWING SHEET OF 1

Jul. 15, 1975

Series/parallel connected single phase power transformer

INVENTOR: Manimalathu, Abraham I., Peru, Massachusetts

... [*2] consists of two high voltage windings and two low voltage windings.

[*3] 3. A single phase electrical power transformer as defined in claim 2 wherein said high voltage windings are of the layer type, the low voltage windings between high voltage windings is of the helical type and the remaining low voltage winding is of the layer type.

[*4] 4. A single phase electrical power transformer as defined in claim 2 wherein said high voltage windings are of the layer type, the low voltage windings between high voltage windings is of the helical type and the remaining low voltage winding is of the disc type.

[*5] 5. A single phase electrical power transformer as defined in claim 2 wherein said high voltage windings are of the disc type, the low voltage winding between high voltage windings of the helical type and the remaining low voltage winding is of the layer type.

[*6] 6. A single phase electrical power transformer as defined in claim 2 wherein said high voltage windings are of the disc type, the low voltage winding between the high voltage windings is of the ...

LEVEL 1 - 196 OF 225 PATENTS

3,892,655

Jul. 1, 1975

Layered clay minerals, catalysts, and processes for using

PAGE 213

INVENTOR: Hickson, Donald A., Richmond, California

What is claimed is:

[*1] 1. A hydroconversion process comprising contacting a hydrocarbon feedstock at conventional hydroconversion conditions with a catalyst comprising (1) a layer-type trioctahedral, clay-like mineral, and (2) at least one hydrogenation component, said mineral having prior to dehydrating and calcining of said catalyst, the empirical formula:
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice ...

... [*9] claim 1 wherein said hydrogenation component comprises platinum.

[*10] 10. A catalytic conversion process comprising contacting a hydrocarbon feedstock at conventional catalytic conversion conditions with a catalyst comprising a layer-type trioctahedral, clay-like mineral, said mineral having prior to dehydrating and calcining of said catalyst the empirical formula:

MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said ...

PAGE 214

LEVEL 1 - 197 OF 225 PATENTS

3,888,678

Jun. 10, 1975

Method for adjusting triboelectric charging characteristics
of materials

INVENTOR: Bailey, Jr., William J., Rochester, New York
Houle, James F., Rochester, New York
Van Norman, Gilden R., Rochester, New York

... [*50] agent has the following empirical structure:

[*51] 51. The film base element of claim 50 further including Saponin.

[*52] 52. A film base element suitable for the reception of at least one radiation sensitive layer and of the type subject to triboelectric charging upon impact and dissociation with another usually dissimilar material said element having a surface thereof modified against generation of triboelectrical charges sufficient in electrical potential to cause static ...

LEVEL 1 - 198 OF 225 PATENTS

3,887,454

<=2> GET 1st DRAWING SHEET OF 1

Jun. 3, 1975

Layered clay minerals and processes for using

INVENTOR: Hickson, Donald A., Richmond, California

What is claimed is:

[*1] 1. A hydroconversion process comprising contacting a hydrocarbon feedstock at conventional hydroconversion conditions with a catalyst comprising: (1) a layer-type dioctahedral, clay-like mineral, and (2) at least one hydrogenation component, said mineral having prior to dehydrating and calcining of said catalyst, the empirical formula:
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice ...

... [*9] claim 1 wherein said hydrogenation component comprises platinum.

[*10] 10. A catalytic conversion process comprising contacting a hydrocarbon feedstock at conventional catalytic conversion conditions with a catalyst comprising a layer-type dioctahedral, clay-like mineral, said mineral having prior to dehydrating and calcining of said catalyst the empirical formula:
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said ...
PAGE 216

LEVEL 1 - 199 OF 225 PATENTS

3,884,539

<=2> GET 1st DRAWING SHEET OF 1

May 20, 1975

Method of making a multialkali electron emissive layer

INVENTOR: Sommer, Alfred Hermann, Princeton, New Jersey

I claim:

[*1] 1. A method of activating a multialkali electron-emissive cathode layer, of the type wherein a layer of antimony is exposed at elevated temperature, within an evacuated body, to vapors of a plurality of alkali metals including cesium, to form an electron-emissive compound, wherein the improvement comprises:

exposing the cathode layer to ...

LEVEL 1 - 200 OF 225 PATENTS

3,875,288

Apr. 1, 1975

Production of synthetic silicate minerals

INVENTOR: Hoffman, George W., Houston, Texas
Blankenship, H. Michael, Houston, Texas
Granquist, William T., Houston, Texas

Having described the invention, we claim:

[*1] 1. The process of producing a 2:1 layer-type clay-like mineral product having the empirical formula:
 $n\text{SiO}_2:\text{Al}_2\text{O}_3:\text{mAB}:\text{xH}_2\text{O}$

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 1.7 to 3.0,

m is from 0.2 to 0.6,

...

LEVEL 1 - 201 OF 225 PATENTS

3,864,931

PAGE 218

<=2> GET 1st DRAWING SHEET OF 1

Feb. 11, 1975

PROCESS AND APPARATUS FOR FOOD FREEZING

INVENTOR: Guttinger, Manfred, Leinfelden, Germany, Federal Republic of

... [*11] second flow than for said first flow.

[*12] 12. Process for freezing foodstuffs comprising the successive steps of:

placing foodstuffs in a substantially flat layer on a substantially horizontal support, which layer is of the type which would exert such a resistance against the through flow of a medium from above that it would be extremely difficult for the medium to flow through the layer and through the support which has a plurality of spaced openings extending therethrough,

...

LEVEL 1 - 202 OF 225 PATENTS

3,864,726

PAGE 219

<=2> GET 1st DRAWING SHEET OF 1

Feb. 4, 1975

CONTROLLABLE SEMICONDUCTOR RECTIFIER

INVENTOR: Semikron Gesellschaft fur Gleichrichterbau und Elektronik m.b.H.,
Zirndorf, Germany, Federal Republic of

I claim:

[*1] 1. In a controllable semiconductor rectifier device including: a monocrystalline semiconductor body having planar major outer surfaces and four layer-type zones of alternately opposite conductivity types with the one of the inner zones of said semiconductor body which serves as the base zone, and which is adjacent to the one of the outer zones of said semiconductor body which serves as the emitter ...

PAGE 220

LEVEL 1 - 203 OF 225 PATENTS

3,858,236

<=2> GET 1st DRAWING SHEET OF 2

Dec. 31, 1974

FOUR LAYER CONTROLLABLE SEMICONDUCTOR RECTIFIER WITH
IMPROVED FIRING PROPAGATION SPEED

INVENTOR: Schafer, Horst, Zirndorf, Germany, Federal Republic of
Herbinger, Lothar, Nurnberg, Germany, Federal Republic of

We claim:

[*1] 1. In a controllable semiconductor rectifier device including: a monocrystalline semiconductor body having four layer-type zones of alternately opposite conductivity types and with the one of the inner zones of said semiconductor body which borders on the one of the outer zones of said semiconductor body which serves as the emitter zone of the device having a portion thereof which is to ...

PAGE 221

LEVEL 1 - 204 OF 225 PATENTS

3,854,983

Dec. 17, 1974

FLAMEPROOF COVERING MATERIAL, SUCH AS TICKING

INVENTOR: Brodnyan, John G., Langhorne, Pennsylvania

I claim:

[*1] 1. A cover fabric of composite-layer type comprising a light-weight woven or damask fabric, a soft, flexible layer adhered thereto formed of a

crushed foam of a polymeric material and a metal-containing coating of about 0.5
to ...

LEVEL 1 - 205 OF 225 PATENTS

3,849,217

<=2> GET 1st DRAWING SHEET OF 6

Nov. 19, 1974

METHOD OF MANUFACTURING HIGH FREQUENCY DIODE

INVENTOR: Kroger, Harry, Sudbury, Massachusetts
Potter, Curtis N., Holliston, Massachusetts

We claim:

[*1] 1. The method of making a high frequency diode device from a body of semiconductor material having type n + conductivity and having an epitaxial layer of type n conductivity, the method comprising:

forming a layer of type p conductivity material at a surface of said epitaxial layer,

forming a metal layer of chromium over said surface,

forming a metal layer of gold over said chromium layer,

...

... [*4] contiguous metal ring layers by etching, and
removing said mask.

[*5] 5. The method of making a high frequency diode device from a body of semiconductor material having type n + conductivity and an epitaxial layer having type n conductivity, the method comprising:

forming a layer of type p conductivity material at a first free surface of said epitaxial layer,

forming a base layer of gold at a second free surface of said type n + semiconductor material,

forming ...

LEVEL 1 - 206 OF 225 PATENTS

3,844,979

Oct. 29, 1974

LAYERED CLAY MINERALS, CATALYSTS, AND PROCESSES FOR USING

PAGE 223

PAGE 222

INVENTOR: Hickson, Donald A., Richmond, California

What is claimed is:

[*1] 1. A layer-type, trioctahedral, clay-like mineral having the empirical formula
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said alumina, said magnesia, said A and B, and wherein

s is from ...

... [*5] hydrogen form, wherein $s = 1.166 a = 0.08$, and said mineral having after calcination a fluoride content of from 1 to 3 weight percent.

[*6] 6. A catalytic cracking catalyst comprising dehydrated, calcined, layer-type, trioctahedral, clay-like mineral having prior to dehydration and calcining of said catalyst the empirical formula
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said alumina, said ...

... [*7] dehydrated mineral is composited with an amorphous inorganic oxide.

[*8] 8. The catalytic cracking catalyst of claim 6 wherein said dehydrated mineral is composited with a zeolite.

[*9] 9. A catalyst composite comprising:

A. a layer-type, trioctahedral, clay-like mineral having prior to dehydration and calcining of said catalyst the empirical formula
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said alumina, said ...

LEVEL 1 - 207 OF 225 PATENTS

3,844,978

<=2> GET 1st DRAWING SHEET OF 1

Oct. 29, 1974

LAYERED CLAY MINERALS AND PROCESSES FOR USING

INVENTOR: Hickson, Donald A., Richmond, California

What is claimed is:

[*1] 1. A layer-type, dioctahedral, clay-like mineral having the empirical formula
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said alumina, said magnesia, said A and said B, and wherein

...

... [*5] hydrogen form, wherein $s = 3.28$, $a = 0.74$, and said mineral having after calcination a fluoride content of from 1 to 3 weight percent.

[*6] 6. A catalytic cracking catalyst comprising dehydrated, calcined, layer-type, dioctahedral, clay-like mineral having prior to dehydration and calcining of said catalyst the empirical formula
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said alumina, said ...

... [*7] dehydrated mineral is composited with an amorphous inorganic oxide.

[*8] 8. The catalytic cracking catalyst of claim 6 wherein said dehydrated mineral is composited with a zeolite.

[*9] 9. A catalyst composite comprising:

A. a layer-type, dioctahedral, clay-like mineral having prior to dehydration and calcining of said catalyst the empirical formula
MgO : sSiO₂ : aAl₂O₃ : bAB : xH₂O

wherein the layer-lattice structure is composed of said silica, said alumina, said ...

PAGE 225

LEVEL 1 - 208 OF 225 PATENTS

3,818,248

<=2> GET 1st DRAWING SHEET OF 2

Jun. 18, 1974

SERIALLY CONNECTED SEMICONDUCTOR SWITCHING DEVICES
SELECTIVELY CONNECTED FOR PREDETERMINED VOLTAGE BLOCKING AND
RAPID SWITCHING

INVENTOR: Pittman, Paul F., Pittsburgh, Pennsylvania

... [*1] minimizes the turn on time of said first number of devices.

[*2] 2. The subject matter of claim 1 wherein: said voltage varies over a range of at least an order of magnitude; said switching devices are of the four layer type; said means for selectively connecting is such that said second number of said switching devices is in two groups of approximately equal size at the ends of the series connection.

[*3] 3. The subject matter of claim 1 wherein: ...
LEVEL 1 - 209 OF 225 PATENTS

3,816,343

Jun. 11, 1974

KAOLINITE COATED WITH SYNTHESIZED LAYER-TYPE SILICATE
MINERALS

INVENTOR: Hoffman, George W., Houston, Texas
Granquist, William T., Houston, Texas

Having described the invention, we claim:

[*1] 1. The process of preparing a synthetic layer-type mineral-kaolinite complex which consists in commingling kaolinite with a reaction mixture consisting essentially of:

water;

a minor proportion of alumina;

silica in the molar ratio to said alumina of 2.7 to 3.3; and

...

... [*1] alumina of 0.2 to 0.6;

thereafter autoclaving the mixture thus formed at a temperature within the range of 280o to 315oC. for a period of time sufficient for said reaction mixture to be converted to a layer-type clay-like mineral;

and cooling said mixture and recovering said complex therefrom.

[*2] 2. The process in accordance with claim 1 wherein the weight ratio of solids in said reaction mixture to said kaolinite is within the range of from 5 : 1 to 1 : 5.

[*3] 3. A complex consisting essentially of particles of kaolinite coated with a layer-type mineral having the empirical formula:
nSiO2:Al2O3:mAB:xH2O

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 2.4 to 3.0,

m is from 0.2 to 0.6,

A is one equivalent of an ...

... [*3] density than a mechanical mixture of the same said components of said clay-like mineral in said kaolinite.

[*4] 4. A complex in accordance with claim 3 in which the weight ratio of said layer-type mineral to said kaolinite is within the range of from 5:1 to 1:5.

PAGE 227

LEVEL 1 - 210 OF 225 PATENTS

3,761,171

<=2> GET 1st DRAWING SHEET OF 3

Sep. 25, 1973

NEGATIVE-POSITIVE, POSITIVE-POSITIVE EXPOSURE STATION

INVENTOR: Fields, Gary D., Parker, Colorado

... [*15] comprising:

means for supporting the photosensitive surface for exposure;

a layered sandwich structure which includes in order:

a first transparent electrode;

a photoconductive layer;

a liquid crystal layer of the type having the capacity to store an image at least temporarily; and

a second transparent electrode;

means for applying a first potential between said electrodes during formation of a temporary image in said ...

... [*16] means for supporting the charged photoconductive surface for exposure;

a layered sandwich structure which includes in order:

a first transparent electrode;

a photoconductive layer;

a liquid crystal layer of the type having the capacity to store an image at least temporarily; and

a second transparent electrode;

means for applying a first potential between said electrodes during formation of a temporary image in said ...

LEVEL 1 - 211 OF 225 PATENTS

3,720,847

<=2> GET 1st DRAWING SHEET OF 3

Mar. 13, 1973

POWER CURRENT CRYOTRON WITH FLAT GATE CONDUCTOR

INVENTOR: Massar, Ernst, Erlangen, Germany, Federal Republic of

I claim:

[*1] 1. A power current cryotron comprising an insulating member and a layer type gate conductor superconducting layer on the insulating member, said layer having a thickness in the order of magnitude of the depth of penetration of a magnetic field into the superconducting layer, said insulating member and said layer ...

... [*1] during operation of said cryotron adjacent portions of said layer conduct current in opposite directions.

[*2] 2. A power current cryotron comprising a tubular insulating member having an axis and a layer type gate conductor superconducting layer on said insulating member, said layer having a thickness in the order of magnitude of the depth of penetration of a magnetic field into the superconducting layer, said insulating member and said ...

LEVEL 1 - 212 OF 225 PATENTS

3,719,535

<=2> GET 1st DRAWING SHEET OF 1

Mar. 6, 1973

HYPERFINE GEOMETRY DEVICES AND METHOD FOR THEIR FABRICATION

INVENTOR: Zoroglu, Demir S., 4917 North 73rd Street, Apt. 9, Scottsdale, Arizona 85251

... [*1] sequence of steps and the use of materials for minimizing the number of steps required, comprising the steps of:

providing a semiconductor body of a first type of conductivity and having an upper surface;

forming a first passivating layer of the type operating to act as a diffusion barrier on said upper surface;

forming a plurality of apertures in said passivating layer which are aligned each to the other;

forming a second passivating layer of the type through which conductivity type determining impurities pass over said first layer and said exposed surface of said semiconductor body;

forming a third passivating layer of the type operating to act as a diffusion barrier over said second layer;

patterning said third layer such as to form at least one aperture overlying a selected aperture in said ...

... [*6] steps and through the use of materials for minimizing the number of steps required, comprising the steps of:

providing a semiconductor body of a first type of conductivity and having an upper surface;

forming a first passivating layer of the type operating to act as a diffusion barrier on said upper surface;

forming a plurality of apertures in said passivating layer which are aligned each to the other for exposing an equal plurality of surface ...
E 230

PAG

LEVEL 1 - 213 OF 225 PATENTS

3,716,969

<=2> GET 1st DRAWING SHEET OF 2

Feb. 20, 1973

CONTINUOUS MOVING LAYER TYPE ADSORPTION DEVICE

INVENTOR: Maeda, Isamu, Niihama-shi, Japan

What I claim is:

[*1] 1. A continuous moving layer type adsorption device employed in a gas desulfurization system, comprising:

a. an adsorption vessel main body filled with activated charcoal, and

b. a rectifying device, said adsorption vessel main ...

LEVEL 1 - 214 OF 225 PATENTS

PAGE 231

Jan. 30, 1973

MULTI-LAYER COLOR PHOTOGRAPHIC SILVER HALIDE LIGHT-SENSITIVE MATERIALS

INVENTOR: Hayashi, Jun, Kanagawa, Japan
Sato, Akira, Kanagawa, Japan

What is claimed is:

[*1] 1. A multi-layer type color photographic light-sensitive material characterized in that a merocyanine dye having the following general formula [I]

wherein X is a member selected from the group consisting of a sulfur atom, a selenium ...

... [*1] consisting of thiazolines, thiazoles, benzthiazoles, naphthothiazoles, oxazoles, benzoxazoles, naphthoxazoles, selenazoles, benzselenazoles naphthoselenazoles, benzimidazoles, naphthimidazoles, 2-quinolines, 2-pyridines, and indolines, is incorporated in at least one layer of said multi-layer type color photographic light-sensitive material, said multi-layer type color photographic light-sensitive material comprising, in order,

[*1] 1. a support,

[*2] 2. a subbing layer,

[*3] 3. a red sensitive silver halide emulsion layer,

[*4] 4. a ...

... [*5] 1 to 10.0 mole percent, the remaining silver halide emulsion layers containing a silver halide selected from the group consisting of AgBr, AgI, AgCl, AgClBr, AgClI, AgIBr and AgClIBr.

[*2] 2. The multi-layer type color photographic light-sensitive material as claimed in claim 1 wherein each of R1, R2 and R3 is selected from a group consisting of a hydrogen atom, a methyl group, an ethyl ...

... [*2] group, a sulfoethyl group, a 4-carboxyphenethyl group, a 4-sulfophenethyl group, a phenyl group, a 4-carboxyphenyl group, and a 4-sulfophenyl group.

Pat. No. 3713828, *2

[*3] 3. The multi-layer type color photographic light-sensitive material as claimed in claim 1 wherein the heterocyclic ring completed by Z is selected from the group consisting of the thiazolines, thiazoles, benzthiazoles, naphthothiazoles, oxazoles, benzoxazoles, naphthoxazoles, selenazoles,

benzelenazoles, naphthoselenazoles, indolenines, benzimidazoles, naphthimidazoles, 2-quinolines and 2-pyridines.

[*4] 4. The multi-layer type color photographic light-sensitive material as claimed in claim 1, wherein said merocyanine dye is incorporated in at least one of the layers consisting of the silver halide emulsion layers and the layers adjacent to the silver halide emulsion layers.

[*5] 5. The multi-layer type color photographic light-sensitive material as claimed in claim 1, wherein, after development, cyan, magenta, and yellow images are formed in the red-sensitive, the green-sensitive, and the blue-sensitive silver halide emulsion layers, respectively.

[*6] 6. The multi-layer type color photographic light-sensitive material as claimed in claim 1, wherein the silver halide is selected from the group consisting of silver bromide, silver iodide, silver chloride, silver chlorobromide, silver iodobromide, and silver chloro-iodobromide.

[*7] 7. The multi-layer type color photographic light-sensitive material as claimed in claim 1, wherein said merocyanine dye has the formula

[*8] 8. The multi-layer color photographic light-sensitive material as claimed in ...

PAGE 233

LEVEL 1 - 215 OF 225 PATENTS

3,710,211

<=2> GET 1st DRAWING SHEET OF 1

Jan. 9, 1973

FRONT CONTACTED ELECTRICAL COMPONENT

INVENTOR: Behn, Reinhard, Balanstr. 95, Munich, Germany, Federal Republic of
Gottlob, Heinrich, Annahofstr. 25, Regensburg, Germany, Federal Republic of
Hoyler, Gerhard, Balanstr. 362, Munich, Germany, Federal Republic of
Kessler, Hartmut, Dechbettener Str. 19, Regensburg, Germany, Federal Republic of

We claim as our invention:

[*1] 1. A stacked layer type capacitor for being supported on its lead wires in spaced apart openings on a printed circuit board comprising: a plurality of planar stacked dielectric layers, a metal coating on each of the ...

PAGE 234

LEVEL 1 - 216 OF 225 PATENTS

3,698,296

Oct. 17, 1972

ACTINIC LABEL-MAKING TOOL

INVENTOR: Heuser, Elliott G., Mequon, Wisconsin
Muttera, Jr., William H., Whitefish Bay, Wisconsin

We claim:

[*1] 1. A label-making tool adapted for the manufacture of labels from tape which has an adhesive layer and an ultraviolet-imaging layer of the type which activates to visibly change color upon exposure to ultraviolet light and deactivates upon exposure to visible light, said tool comprising, in combination:

I. a housing having a first portion adapted to ...
LEVEL 1 - 217 OF 225 PATENTS

3,696,499

Oct. 10, 1972

METHOD FOR MAKING A COMPOSITE TUBE

INVENTOR: Dromsky, John A., North Attleboro, Massachusetts

... [*6] laminate material together.

[*7] 7. A method for making a double-walled tubing comprising the steps of heating a strip of composite metal laminate material embodying a thin inner layer of Type 304 austenitic stainless steel which is sandwiched between and metallurgically bonded to two relatively thicker outer layers of Type 1008 aluminum-killed low carbon steel to a temperature in the range from about 1850°F. to about 2,005°F. for a period of time in the range from about one-half to 2 minutes, ...

LEVEL 1 - 218 OF 225 PATENTS

3,688,395

Sep. 5, 1972

CONSTRUCTION METHOD OF MAKING ELECTRICAL CONNECTION

INVENTOR: Cummings, Harold K., Whitewater, Wisconsin

... [*1] contact therewith.

[*2] 2. The invention in accordance with claim 1,

wherein said base member has an outer conductive surface on which said cutting means is formed, and

wherein said insulated wire is wound to form a coil of the multi-layer type.

[*3] 3. The invention in accordance with claim 1,

wherein said base member is a terminal to which said insulated wire is to be electrically connected.

[*4] 4. A method of making a multi-layer electrical ...

37

LEVEL 1 - 219 OF 225 PATENTS

3,664,973

May 23, 1972

HYDROTHERMAL METHOD FOR MANUFACTURING A NOVEL CATALYTIC
MATERIAL, CATALYSTS CONTAINING SAID MATERIAL, AND PROCESSES
USING SAID CATALYSTS

INVENTOR: Jaffe, Joseph, Berkeley, California

What is claimed is:

[*1] 1. A synthetic layer-type, crystalline, clay-like mineral having the empirical formula:

$n\text{SiO}_2 : \text{Al}_2\text{O}_3 : \text{mAB} : x\text{H}_2\text{O}$

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 0.4 to 15.0

m is from 0.2 to 0.6

...

... [*7] hydrogenating component precursor selected from compounds of Group VI metals and compounds of Group VIII metals.

[*8] 8. A hydrocarbon conversion catalyst cracking component material obtained by the dehydration of a synthetic layer-type, crystalline, clay-like mineral having the empirical formula:

$n\text{SiO}_2 : \text{Al}_2\text{O}_3 : \text{mAB} : x\text{H}_2\text{O}$

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 0.4 to 15.0

m is from 0.2 to 0.6

...

... [*12] a hydrogenating component precursor selected from compounds of Group VI metals and compounds of Group VIII metals.

[*13] 13. A process of preparing a catalytic component material which comprises dehydrating a synthetic layer-type, clay-like, crystalline mineral having the empirical formula:

nSiO₂ : AL₂O₃ : mAB : xH₂O

where the layer lattices comprise said silica, said alumina, and said B, and where PAGE 238

Pat. No. 3664973, *13

n is from 0.4 to 15.0

m is from 0.2 to 0.6

...

LEVEL 1 - 220 OF 225 PATENTS

PAGE 239

3,626,352

Dec. 7, 1971

ATTENUATOR SWITCHES HAVING DEPOSITED LAYER-TYPE CIRCUITRY

INVENTOR: McCoig, Kenneth W., Anaheim, California

... [*2] said second wafer being movable relative to said first wafer, an attenuation circuit disposed on a face of said first wafer, said attenuation circuit comprising a resistor array having deposited-layer-type resistors and conductors,

contact means, attached to said first wafer, for making electrical connection to conductors of said resistor array, said contact means having contact ends spring biased against said ...

... [*2] circuit depending on the relative orientation of said first and second wafers.

[*3] 3. An attenuator switch as defined in claim 2 wherein said electrically insulative material comprises a ceramic and wherein said deposited layer-type resistors are fabricated of cermet or conductive plastic.

[*4] 4. An attenuator switch as defined in claim 2 wherein said resistor array comprises first, second, and third resistors connected as a pi ...

... [*11] spaced parallel relationship with a plurality of rotary wafers, a shaft extending through an opening in the middle of each stationary wafer and cooperating to rotate simultaneously all of said rotary wafers,

a deposited layer-type attenuator section disposed on each of said stationary wafers, each attenuator section comprising deposited layer-type resistors and conductors,

a set of deposited layer-type conductive switch pads disposed on each rotary wafer, and

spring-metal contacts extending from each stationary wafer and electrically connected to the attenuator section thereof, said contacts cooperating with switch pads on an associated rotary wafer to insert or bypass said section depending on the rotational position of said shaft.

[*12] 12. A step attenuator switch as defined in claim 11 wherein said deposited layer-type attenuator section is disposed on the front face of said stationary wafer and wherein ends of said contacts project rearwardly of said wafer through spaced holes therein.

[*13] 13. A step attenuator switch as defined in claim 11 wherein said deposited layer-type attenuator section is disposed on the front face of said stationary wafer and wherein ends of said contacts project forwardly of said wafer.

Pat. No. 3626352, *13

PAGE 240

[*14] 14. A step attenuator switch as defined in claim 11 wherein ...

... [*14] each contact being attached by a fastener spaced a selected distance from a free end of said each contact,

said attenuator section comprising first, second, and third deposited layer-type resistors connected in pi configuration, a first deposited layer-type conductor connecting the junction of said first and second resistors to one of said contacts, a second deposited layer-type conductor connecting the junction of said second and third resistors to a second of said contacts, the junction of said first and third resistors being connected to a common terminal by a third deposited layer-type conductor, and

a pair of input/output terminals electrically connected respectively to said third and said fourth contacts.

[*15] 15. A bridged-T attenuator comprising:

a wafer of electrically insulative material,

portions of a bridged-T circuit disposed on both major faces of said wafer and formed of deposited layer-type components, and

wiper contact means rotatable with respect to said wafer and cooperating with said deposited layer-type components for controlling the attenuation of said attenuator.

[*16] 16. A bridged-T attenuator as defined in claim 15 wherein said wafer comprises a refractory material and has a central opening ...

... [*16] being attached to a shaft extending through said opening, said attenuator further comprising an input terminal, an output terminal and a common terminal all attached to said wafer, a pair of deposited layer-type fixed resistors being connected in series by means of deposited layer-type conductors between said input and output terminals.

[*17] 17. A bridged-T attenuator as defined in claim 16 further comprising:

a first annular deposited layer-type conductive switch pad disposed on one major face of said wafer surrounding said opening and electrically connected by means of a deposited layer-type conductive strip to said input terminal,

a first plurality of deposited layer-type conductive switch pads disposed in a circle on said one major face surrounding said central opening, a pair of said first plurality of switch pads being electrically connected respectively to said input and output terminals, and

a first plurality of deposited layer-type relative elements disposed on said one major face and electrically connected between adjacent ones of said first plurality of switch pads, said wiper contact means selectively electrically shorting one of ...

... [*17] controlling the effective resistance of one portion of said bridged-T circuit.

Pat. No. 3626352, *17

[*18] 18. A bridged-T attenuator as defined in claim 17 further comprising:

a second annular deposited layer-type conductive switch pad disposed on the other major face of said wafer surrounding said opening and electrically connected by means of a deposited layer-type conductive strip to the junction of said pair of fixed resistors,

a second plurality of deposited layer-type conductive switch pads disposed in a circle on said other major face surrounding said central opening

a second plurality of deposited layer-type resistive elements disposed on said other major face, one of said second plurality of resistive elements being electrically connected between one of said second plurality of switch pads and said common ...

LEVEL 1 - 221 OF 225 PATENTS

3,617,491

Nov. 2, 1971

HYDROCRACKING CATALYST COMPRISING A LAYERED CLAY-TYPE
CRYSTALLINE ALUMINOSILICATE COMPONENT, A GROUP VIII

COMPONENT AND A THORIUM OR URANIUM COMPONENT, AND PROCESS
USING SAID CATALYST

INVENTOR: Csicsery, Sigmund M., Lafayette, California

... [*5] metals, and wherein said hydrogenating components are contained in said matrix.

[*6] 6. A catalyst as in claim 5, which further comprises Titania.

[*7] 7. A catalyst comprising:

A. A dehydrated layer-type, crystalline, claylike mineral-cracking component which prior to dehydration has the empirical formula
nSiO₂:Al₂O₃:mAB: xH₂O,

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 2.4 to ...

LEVEL 1 - 222 OF 225 PATENTS

3,617,490

Nov. 2, 1971

PAGE 243

HYDROCRACKING CATALYST COMPRISING A LAYERED CLAY-TYPE
CRYSTALLINE ALUMINOSILICATE COMPONENT, A GROUP VIII
COMPONENT, AND A CHROMIUM OR TUNGSTEN COMPONENT, AND PROCESS
USING SAID CATALYST

INVENTOR: Csicsery, Sigmund M., Lafayette, California

... [*5] metals, and wherein said hydrogenating components are contained in said matrix.

[*6] 6. A catalyst as in claim 5, which further comprises titania.

[*7] 7. A catalyst comprising:

A. A dehydrated layer-type, crystalline, claylike mineral cracking component which prior to dehydration has the empirical formula
nSiO₂:Al₂O₃:mAB: xH₂O,

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 2.4 to 3.0

LEVEL 1 - 223 OF 225 PATENTS

PAGE 244

Nov. 2, 1971

HYDROCRACKING CATALYST COMPRISING A LAYERED CLAY-TYPE
CRYSTALLINE ALUMINOSILICATE COMPONENT, A GROUP VIII
COMPONENT AND GOLD, PROCESS USING SAID CATALYST

INVENTOR: Csicsery, Sigmund M., Lafayette, California

... [*6] metals, and wherein said hydrogenating components are contained in said matrix.

[*7] 7. A catalyst as in claim 6, which further comprises titania.

[*8] 8. A catalyst comprising:

A. a dehydrated layer-type, crystalline, claylike mineral cracking component which prior to dehydration has the empirical formula

$n\text{SiO}_2 : \text{Al}_2\text{O}_3 : \text{mAB} : x\text{H}_2\text{O}$,

where the layer lattices comprise said silica, said alumina, and said B, and where

n is from 2.4 to 3.0

...

LEVEL 1 - 224 OF 225 PATENTS

PAGE 245

3,615,501

Oct. 26, 1971

COLOR PHOTOGRAPHIC DEVELOPING PROCESS

INVENTOR: Ohi, Reiji, Kanagawa, Japan
Shimamura, Isao, Kanagawa, Japan
Shishido, Tadao, Kanagawa, Japan

... [*4] black and white developer or in a pretreatment bath before the black and white development.

[*5] 5. The process according to claim 1 wherein said multilayer color photographic element is a coupler-in-emulsion layer-type color photographic element and said compound is incorporated in the black and white developer.

[*6] 6. The process according to claim 1 wherein said process is a high temperature process conducted at a temperature higher than ...

246

LEVEL 1 - 225 OF 225 PATENTS

Oct. 5, 1971

STABILIZED AC SUPERCONDUCTOR

INVENTOR: Massar, Ernst, Erlangen, Germany, Federal Republic of
 Parsch, Claus-Peter, Erlangen, Germany, Federal Republic of

We claim:

[*1] 1. An AC superconductor, comprised of a superconducting layer of type I intended for the load current, which is placed with a minimum contact resistance upon a metallic stabilizing layer of a superconducting material of type III, which during overloading absorbs the current, at least partially and temporarily, said superconductor of type I encloses said superconductor of type III provided for stabilizing purposes in the form of a tube.

[*2] 2. The superconductor of claim 1 wherein the superconducting layer of type I is lead.

[*3] 3. The superconductor of claim 1, wherein the superconductors are concentric tubes.

[*4] 4. The superconductor of claim 3, wherein at least two mutually contacting layers of superconducting material of type III, provided for stabilization, are ...

... [*7] tube upon whose outer wall the superconductor layers are placed.

[*8] 8. The superconductor of claim 5, wherein the thickness of the respective superconducting layer is between 1 and 10 μ .

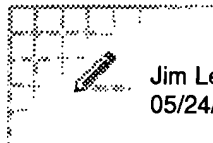
[*9] 9. An AC superconductor, comprised of a superconducting layer of type II intended for the load current, which is placed with a minimum contact resistance upon a metallic stabilizing layer of a superconducting material of type III, which during overloading absorbs the current at least ...

... [*11] III, provided for stabilization, are present which have higher critical field strengths for the alternating current the further they are from the superconductor of type II which is provided for the current load.

[*12] 12. The superconductor of claim 9 wherein the superconducting layer of type II is niobium.

* 246 PAGES
 * 12:38 P.M. STARTED 12:44 P.M. ENDED
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 * 12/22/98

ATTACHMENT B



Jim Leonard
05/24/98 02:38 PM

To: Daniel P Morris/Watson/IBM@IBMus
cc:
From:
Subject: Layered Like or Type

Dan,

For Layered Like or Type, here are some article abstracts. One book was found for Layered Type.

Article listing are from a search of INSPEC on DIALOG.

If citation information is needed, let me know.

All the best,

Jim

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Voice=(914) 945 3468; Fax=(914) 945 4144

File 2:INSPEC 1969-1998/May W3
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Layered like

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?•s layered()like
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      136878 LIKE
      S13 5 LAYERED()LIKE
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      2642109 PY=1969 : PY=1985
      S14 1 S13 AND PY=1969:1985
?•t 14/7/1
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14/7/1
DIALOG(R)File 2:INSPEC
(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02401641 INSPEC Abstract Number: A85032877

Title: Polymorphism of diphthalocyanine-neodymium. Molecular and crystal structure of beta phase

Author(s): Darovskikh, A.N.; Tsytsenko, A.K.; Frank-Kamenetskaya, O.V.; Fundamenskii, V.S.; Moskalev, P.N.

Author Affiliation: Inst. of Nucl. Phys., Acad. of Sci., Leningrad, USSR
 Journal: Kristallografiya vol.29, no.3 p.455-61
 Publication Date: May-June 1984 Country of Publication: USSR
 CODEN: KRISAJ ISSN: 0023-4761
 Translated in: Soviet Physics - Crystallography vol.29, no.3 p.273-6
 Publication Date: May-June 1984 Country of Publication: USA
 CODEN: SPHCA6 ISSN: 0038-5638
 U.S. Copyright Clearance Center Code: 0038-5638/84/030273-04\$03.90
 Language: English Document Type: Journal Paper (JP)
 Treatment: Experimental (X)

Abstract: X-ray structural analysis reveals that diphthalocyanine-neodymium, with the composition $\text{PcNdPc}/\text{sub ox/}$ ($\text{Pc}=(\text{C}/\text{sub } 32/\text{H}/\text{sub } 16/\text{N}/\text{sub } 8)/\text{sup } 2-/$, $\text{Pc}/\text{sub ox/}=(\text{C}/\text{sub } 32/\text{H}/\text{sub } 16/\text{N}/\text{sub } 8)/\text{sup } 1-/$) exists in three polymorphic modifications-tetragonal alpha, orthorhombic gamma, and monoclinic beta. Determination of the crystal structure of the beta phase ($\text{P2}/\text{sub } 1/$ automatic diffractometer, theta-2 theta method, Mo K alpha, $R=0.052$) revealed that it is of the structural type $\text{Pc}/\text{sub } 2/\text{U}$. The sandwich molecules are packed in layers parallel to the ac plane. The metal-ligand distance in the structure of $\text{Pc}/\text{sub } 2/\text{M}$ (where M is a metal ion) is explained by the ratio between the ionic radii ($r/\text{sub Nd}/>r/\text{sub u}/>r/\text{sub Sn}/$). The angle of relative rotation of the ligands is apparently determined by the character of the packing. Comparing the identity periods $T/\text{sub perpendicular}$ to /perpendicular to the layers of molecules in the alpha, beta, and gamma modifications of diphthalocyanine-neodymium ($2T/\text{sup alpha } //\text{sub } (001)/=T/\text{sup beta } //\text{sub } (001)/\sin \beta =T/\text{sup gamma } //\text{sub } (101)/$), one sees that the M-ligand distances are stable in these structures. The relation between the periods $T/\text{sup beta } //\text{sub } (100)/$ approximately= $T/\text{sup beta } //\text{sub } (010)/$ approximately= $1/2T/\text{sub } (110)/\text{sup alpha } /$ in the alpha and beta phases shows that the tetragonal structure is evidently layered like the beta phase. (10 Refs)

Layered type

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23991 LAYERED

419473 TYPE

S15 80 LAYERED()TYPE

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80 S15

2642109 PY=1969 : PY=1985

S16 15 S15 AND PY=1969:1985

?*t 16/7/1-15

16/7/1

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02616964 INSPEC Abstract Number: B86015292

Title: A study of the breakdown mechanism in dual-layer MOS capacitor dielectrics

Author(s): Domangue, E.; Hickman, T.; Pyle, R.; Rivera, R.

Author Affiliation: Motorola Inc., Austin, TX, USA

Conference Title: 35th Electronic Components Conference (Cat. No. 85CH2184-0) p.396-9

Publisher: IEEE, New York, NY, USA

Publication Date: 1985 Country of Publication: USA 516 pp.

U.S. Copyright Clearance Center Code: 0569-5503/85/0000-0396\$01.00

Conference Sponsor: IEEE; Electron. Ind. Assoc

Conference Date: 20-22 May 1985 Conference Location: Washington, DC, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Experimental (X)

Abstract: The time to break down distribution of MOS capacitors fabricated with a multilayer dielectric was studied. The dielectric was composed of 10 nm of thermal silicon dioxide, 15 nm of LPCVD silicon nitride, and 1-3 nm of SiO₂/sub 2/ thermally grown on the Si₃N₄/sub 4/ layer. The test capacitor was constructed with paralleled storage cells in a 64K dynamic memory device. Various electric fields and temperatures were used to stress the layered type of capacitors and a control group consisting of the same vehicle but having a 39 nm silicon dioxide dielectric. Stressed units were physically analyzed to isolate the failure sites. The type and location of the dielectric breakdown faults were found to be similar in both types of dielectric structure. The layered dielectric demonstrated superior reliability, however, which is attributed to lower defectivity or the spatial variation of the applied electric field within the structure. (9 Refs)

16/7/2

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02506581 INSPEC Abstract Number: A85096207

Title: Reflectivity, joint density of states and band structure of group IVb transition-metal dichalcogenides

Author(s): Bayliss, S.C.; Liang, W.Y.

Author Affiliation: Cavendish Lab., Cambridge Univ., UK

Journal: Journal of Physics C (Solid State Physics) vol.18, no.17

p.3327-35

Publication Date: 20 June 1985 Country of Publication: UK

CODEN: JPSOAW ISSN: 0022-3719

U.S. Copyright Clearance Center Code: 0022-3719/85/173327+09\$02.25

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Optical joint density of states (OJDOS) functions have been obtained from Kramers-Kronig analysis of reflectivity measurements for the layered-type materials TiS₂/, TiSe₂/, ZrS₂/, ZrSe₂/, HfS₂/ and HfSe₂/. The reflectivity measurements were made at near-normal incidence over the photon energy range 0.6-14 eV at 77K. Comparison of the OJDOS functions shows that there are many similarities in the band shapes which can be explained in terms of the amount of trigonal distortion present in the crystal lattice and the differences in binding energy of electron levels in the atoms. (9 Refs)

16/7/3

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02225943 INSPEC Abstract Number: A84041348, B84023254

Title: Hydriodic acid photodecomposition on layered-type transition metal dichalcogenides

Author(s): Bicelli, L.P.; Razzini, G.

Author Affiliation: Dept. of Appl. Phys. Chem., Milan Polytech., Milan, Italy

Journal: Surface Technology vol.20, no.4 p.393-403

Publication Date: Dec. 1983 Country of Publication: Switzerland

CODEN: SUTED8 ISSN: 0376-4583

U.S. Copyright Clearance Center Code: 0376-4583/83/\$3.00

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The photodecomposition of hydriodic acid on platinized n-WSe₂/ single crystals immersed in an aqueous 1 M HI solution was studied. During the photodecomposition process, hydrogen evolution only

occurred on the microscopic defects of the sample surface, whereas iodine was produced on the smooth areas where a diffuse orange-red colouring appeared. For polycrystalline specimens, however, hydrogen gas bubbles were formed over the entire surface, the rate of process being markedly slower than on single crystals. The results are discussed with the assumptions that the n-WSe/sub 2/ single crystals behave as Schottky-type photochemical diodes, that the cathodic reaction takes place on the stepped platinum-covered areas and that the anodic reaction occurs on the smooth unplatinized areas. (26 Refs)

16/7/4

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02085031 INSPEC Abstract Number: A83077984, B83041973

Title: Mechanistic studies of reversible layer-type electrodes

Author(s): Rouxel, J.; Molinie, P.; Top, L.H.

Author Affiliation: Lab. de Chimie des Solides, Nantes, France

Journal: Journal of Power Sources vol.9, no.3-4 p.345-57

Publication Date: April-May 1983 Country of Publication: Switzerland

CODEN: JPSODZ ISSN: 0378-7753

U.S. Copyright Clearance Center Code: 0378-7753/83/0000-0000/\$3.00

Conference Title: International Meeting on Lithium Batteries

Conference Date: 27-29 April 1982 Conference Location: Rome, Italy

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: In layered type intercalation electrodes ions are stored reversibly during the functioning of secondary batteries. The behaviour of the system depends on geometrical and electronic factors. The geometrical factors are concerned with the localization of the ions in the host structure; they deal with average structure determinations and local ordering problems. The diffusion properties of the intercalated ions depend on the site geometry, the population of the Van Der Waals gap, the ionicity of the bonds in the host, the stoichiometry of the host, and the mechanical properties of its slabs. Electrons have to be accommodated by the host. The band structure of the host plays an important role in respect of the ability to intercalate, the phase limit, and the stability of the products. Metal-insulator transition may be induced. Other possible factors such as Jahn-Teller effects have also to be considered. (23 Refs)

16/7/5

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01994480 INSPEC Abstract Number: A83023215

Title: Structure of tungstic acids and amorphous and crystalline WO/sub 3/ thin films

Author(s): Ramans, G.M.; Gabrusenoks, J.V.; Veispals, A.A.

Author Affiliation: Inst. of Solid State Phys., P. Stucka Univ., Riga, USSR

Journal: Physica Status Solidi A vol.74, no.1 p.K41-4

Publication Date: 16 Nov. 1982 Country of Publication: East Germany

CODEN: PSSABA ISSN: 0031-8965

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The authors compare the Raman spectra of a-WO/sub 3/ with spectra of crystalline WO/sub 3/.H/sub 2/O, WO/sub 3/.2H/sub 2/O and amorphous bulk WO/sub 3/.H/sub 2/O. It is concluded from the results that the structure of a-WO/sub 3/ films consists of a layered type structure of tungsten hydrates and of a framework structure of tungsten anhydride. The band at 590 cm/sup -1/ is attributed to stretching modes of the terminal

oxygen. By dehydration of amorphous $\text{WO}_{3/1.74}\text{H}_2\text{O}$ one can get amorphous bulk samples with a structure similar to the a-WO_3 thin films. (12 Refs)

16/7/6

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01973788 INSPEC Abstract Number: A83008001

Title: Synthesis of new layered-type and new mixed-layered-type bismuth compounds

Author(s): Kodama, H.; Watanabe, A.

Author Affiliation: Nat. Inst. for Res. in Inorganic Materials, Ibaraki, Japan

Journal: Journal of Solid State Chemistry vol.44, no.2 p.169-73

Publication Date: Sept. 1982 Country of Publication: USA

CODEN: JSSCBI ISSN: 0022-4596

U.S. Copyright Clearance Center Code: 0022-4596/82/110169-05\$02.00/0

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Four new compounds, $\text{PbBi}_2/\text{TiTaO}_8/\text{F}$, $\text{PbBi}_2/\text{TiNbO}_8/\text{F}$, $\text{Bi}_5/\text{Ti}_2/\text{WO}_{14}/\text{F}$, and $\text{Bi}_7/\text{Ti}_5/\text{O}_{20}/\text{F}$, were prepared and identified by X-ray diffraction analysis. Two of them are new members of a family called layered bismuth compounds. The other two are new members of a family called mixed-layered bismuth compounds. Thermal properties of the new compounds were studied. Moreover, the possibility of the existence of other new members belonging to the family called mixed-layered bismuth compounds is discussed. (14 Refs)

16/7/7

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01891945 INSPEC Abstract Number: A82076639

Title: The phase relations in the $\text{Yb}_2/\text{O}_3/\text{Fe}_2/\text{O}_3/\text{MO}$ systems in air at high temperatures (M: Co, Ni, Cu, and Zn)

Author(s): Kimizuka, N.; Takayama, E.

Author Affiliation: Nat. Inst. for Res. in Inorganic Materials, Ibaraki-ken, Japan

Journal: Journal of Solid State Chemistry vol.42, no.1 p.22-7

Publication Date: 15 March 1982 Country of Publication: USA

CODEN: JSSCBI ISSN: 0022-4596

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The phase relations in the $\text{Yb}_2/\text{O}_3/\text{Fe}_2/\text{O}_3$ system at 1350 and 1300 degrees C, the $\text{Yb}_2/\text{O}_3/\text{Fe}_2/\text{O}_3/\text{NiO}$ system at 1300 and 1200 degrees C, the $\text{Yb}_2/\text{O}_3/\text{Fe}_2/\text{O}_3/\text{CuO}$ system at 1000 degrees C and the $\text{Yb}_2/\text{O}_3/\text{Fe}_2/\text{O}_3/\text{ZnO}$ system at 1300 degrees C were determined in air by means of a classical quenching method. New layered-type compounds, YbFeCoO_4 ($a=3.4295(5)$ AA, $c=25.198(3)$ AA), YbFeCuO_4 ($a=3.4808(2)$ AA, $c=24.100(2)$ AA), and YbFeZnO_4 ($a=3.4251(2)$ AA, $c=25.282(2)$ AA), which are isomorphous with YbFe_2/O_3 (space group: $R\bar{3}m$; $a=3.455(1)$ AA, $c=25.109(2)$ AA), and a new compound, Yb_2/CuO_5 , were obtained. In the $\text{Yb}_2/\text{O}_3/\text{Fe}_2/\text{O}_3/\text{NiO}$ system, there are no quaternary compounds. (10 Refs)

16/7/8

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01816212 INSPEC Abstract Number: C82012609

Title: Office automation technology-storage and retrieval of information

Author(s): Kurachi, T.

Author Affiliation: Toshiba Corp., Ome-shi, Japan

Journal: Journal of the Institute of Electronics and Communication Engineers of Japan vol.64, no.2 p.143-9

Publication Date: Feb. 1981 Country of Publication: Japan

CODEN: IECJAJ ISSN: 0373-6121

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Applications (A); Practical (P)

Abstract: The file compositions ordered using link and direct using a page map and B tree type retrieval order are described. Layered type data models as in IBM's IMS, and the MRI System 2000, network type data models as in GE's IDS and Cineam Systems' TOTAL, relational type data model as in IBM's System R and Software AG's ADABAS and distributed type data base are also described. The types of retrieval and their call words are discussed and exemplified. Floppy disc, magnetic drum, magnetic disk, large capacity memory devices and backend systems and database machines are discussed. Micrographics and graphic information files are briefly discussed. (13 Refs)

16/7/9

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01587609 INSPEC Abstract Number: A80098966

Title: A method of measurement of the refractive indices of crystals with layered structure

Author(s): Allakhverdiev, K.R.; Guliev, R.I.; Salaev, E.Yu.; Kulevskii, L.A.; Savelev, A.D.; Smirnov, V.V.

Author Affiliation: Inst. of Phys., Acad. of Sci., Baku, Azerbaidzhan SSR, USSR

Journal: Physica Status Solidi A vol.60, no.1 p.309-12

Publication Date: 16 July 1980 Country of Publication: East Germany

CODEN: PSSABA ISSN: 0031-8965

Language: English Document Type: Journal Paper (JP)

Treatment: New Developments (N); Experimental (X)

Abstract: A method of determining the refractive indices of the ordinary (n_o) and extraordinary (n_e) rays in crystals with layered type structure are described. The refractive indices of layered CdInGaS₄ and TlInS₂ are measured using this technique with the help of laser radiation source at 0.63, 1.15, and 3.39 μ m. The experimentally obtained values of n_o and n_e are extrapolated from 0.6 to 4.0 μ m by the formulas $n_o^2 = A + B(\lambda^2 + C)$; $n_e^2 = K + L/(\lambda^2 + M)$. The values of the extrapolation coefficients A, B, C, K, L, and M for CdInGaS₄ and TlInS₂ crystals are obtained using the electronic computer Mir-2. (4 Refs)

16/7/10

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01496111 INSPEC Abstract Number: B80019231

Title: Fabrication of 8 turn multi-track thin film heads

Author(s): Hanazono, M.; Kawakami, K.; Narishige, S.; Asai, O.; Kaneko, E.; Okuda, K.; Ono, K.; Tsuchiya, H.; Hayakawa, W.

Author Affiliation: Hitachi Res. Lab., Hitachi Ltd., Ibaraki, Japan

Journal: IEEE Transactions on Magnetics vol.MAG-15, no.6 p.1616-18

Publication Date: Nov. 1979 Country of Publication: USA

CODEN: IEMGAQ ISSN: 0018-9464

Conference Title: Joint INTERMAG-MMM Conference

Conference Sponsor: IEEE

Conference Date: 17-20 July 1979 Conference Location: New York, NY, USA

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Practical (P)

Abstract: To obtain high bit and high track densities, fabrication of thin film magnetic recording heads have been studied by a number of companies. The authors describe a newly developed method for fabricating layered type, multi-turn, multi-track thin film inductive heads with a central tap by using photolithographic and thin film deposition techniques. (6 Refs)

16/7/11

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01406419 INSPEC Abstract Number: A79086309

Title: A theoretical study of the effects of various laryngeal configurations on the acoustics of phonation

Author(s): Titze, I.R.; Talkin, D.T.

Author Affiliation: Sensory Communication Res. Lab., Gallaudet Coll., Washington, DC, USA

Journal: Journal of the Acoustical Society of America vol.66, no.1

p.60-74

Publication Date: July 1979 Country of Publication: USA

CODEN: JASMAN ISSN: 0001-4966

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: Simulation of glottal volume flow and vocal fold tissue movement was accomplished by numerical solution of a time-dependent boundary value problem in which nonuniform, orthotropic, linear, incompressible vocal fold tissue media were surrounded by irregularly shaped boundaries, which were either fixed or subject to aerodynamic stresses. Spatial nonuniformity of the tissues was of the layered type, including a mucosal layer, a ligamental layer, and muscular layers. Orthotropy was required to stabilize the vocal folds longitudinally and to accommodate large variations in muscular stress. Incompressibility and vertical motions at the glottis played an important role in producing and sustaining phonation. A nominal configuration for male fundamental speaking pitches was selected, and the regulation of fundamental frequency, intensity, average volume flow, and vocal efficiency was investigated in terms of variations around this nominal configuration. Vocal intensity and efficiency are shown to have local maxima as the configurational parameters are varied one at a time. It appears that oral acoustic power output and vocal efficiency can be maximized by proper adjustments of longitudinal tension of nonmuscular (mucosal and ligamental) tissue layers in relation to muscular layers. Quantitative verification of the 'body-cover' theory is therefore suggested, and several further implications with regard to control of the human larynx are considered. (17 Refs)

16/7/12

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01295844 INSPEC Abstract Number: A79010903

Title: Optical phonons in TlInS/sub 2/

Author(s): Allahverdiev, K.R.; Adigezalov, U.V.; Nani, R.Kh.; Yusifov, Yu.G.

Journal: Izvestiya Akademii Nauk Azerbaidzhanskoi SSR, Seriya Fiziko-Tekhnicheskikh i Matematicheskikh Nauk no.1 p.21-5

Publication Date: 1978 Country of Publication: USSR

CODEN: IAFMAF ISSN: 0002-3108

Abstract: The optical phonons of a wide gap semiconducting TlInS/sub 2/ which has a layered type structure have been investigated by the method of long-wavelength infra-red (JR) and Raman scattering spectroscopy. The splitting of absorption bands is observed when the crystals are cooled down to 100K. The comparison of phonon frequencies determined from JR and Raman experiments revealed TlInS/sub 2/ to be centresymmetric. (10 Refs)

Abstract: The magnetic susceptibility measurements on layered type structure (CH/sub 3/NH/sub 3/)/sub 2/FeCl/sub 2/Br/sub 2/ revealed a transition temperature T/sub N/(H=0) approximately=100K. The transition temperature of (CH/sub 3/NH/sub 3/)/sub 2/FeCl/sub 4/ was previously found to be T/sub N/(H=0) approximately=95K. The effect of magnetic field on the transition temperature and peak intensity for both compounds has been investigated. (7 Refs)

Abstract: Magnetic ordering in the $\text{LiCr}/\text{sub } 1-x/\text{Fe}/\text{sub } x/\text{O}/\text{sub } 2/$ system has been investigated for polycrystal and single crystal specimens characterized by optical and X-ray diffraction techniques. Part of the $\text{Li}/\text{sub } 2/\text{O}-\text{Fe}/\text{sub } 2/\text{O}/\text{sub } 3/-\text{Cr}/\text{sub } 2/\text{O}/\text{sub } 3/$ system was also investigated. Magnetization and susceptibility measurements from 4.2 to 900K and Mossbauer measurements from 4.2 to 300K indicate that all compositions of ordered rocksalt (space group $R3m$) order antiferromagnetically at low temperatures. The first-order phase transition tracked with all Mossbauer parameters. The Weiss molecular field theory for a layered-type antiferromagnet was fitted with two exchange constants. The dependence of theta on x was found to be $\theta = \theta_a/(1-x)^{2/3} + \theta_b/2x(1-x) + \theta_c/x^2$, where $\theta_a = \text{Cr}/\text{sub } 3+/-\text{Cr}/\text{sub } 3+/-$ interaction, $\theta_b = \text{Fe}/\text{sub } 3+/-\text{Cr}/\text{sub } 3+/-$ interaction and $\theta_c = \text{Fe}/\text{sub } 3+/-\text{Fe}/\text{sub } 3+/-$ interaction. A spontaneous magnetization associated with iron-substituted crystals originated with an epitaxial overgrowth of $\text{LiCr}/\text{sub } 4.75/\text{Fe}/\text{sub } 0.25/\text{O}/\text{sub } 2/$.

8/. (29 Refs)

16/7/15
DIALOG(R)File 2:INSPEC
(c) 1998 Institution of Electrical Engineers. All rts. reserv.

00301052 INSPEC Abstract Number: C71019443
Title: A static and dynamic finite element shell-analysis with experimental verification
Author(s): Klein, S.
Author Affiliation: Aerospace Corp., San Bernardino, CA, USA
Journal: International Journal for Numerical Methods in Engineering
vol.3, no.3 p.299-316
Publication Date: July-Sept. 1971 Country of Publication: UK
CODEN: IJNMBH ISSN: 0029-5981
Language: English Document Type: Journal Paper (JP)
Treatment: Theoretical (T)
Abstract: A system of finite element shell analysis codes, called SABOR/DRASTIC, is used to analyse a complex two-layered shell of revolution under static and dynamic asymmetric loads. The dynamic analysis is compared with experimentally measured response. In this linear elastic analysis, emphasis is placed on the inherent flexibility of the finite element method in modelling the complex structural geometry of a given test specimen. Static studies, which involve variations in important shell parameters, and dynamic studies, which provide a successful correlation with experiment, are used to illustrate both the detail and the generality with which shell analyses may now be performed with confidence.

Layered Like books = 0

43=> f (layered-like) or (layered w like)
Searching ...
S E A R C H R E S U L T S

| Search ID | Records Found | Search Term |
|-----------|---------------|------------------------------------|
| S43 | 0 | layered-like |
| S44 | 1440 | layered |
| S45 | 57219 | like |
| S46 | 0 | (layered-like) or (layered w like) |

Layered Type books = 1

47=> f (layered-type) or (layered w type)
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S47 0 layered-type
S48 1440 layered
S49 82277 type
S50 1 (layered-type) or (layered w type)

51=> f s50 and yr < 1986

Searching ...

S E A R C H R E S U L T S

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52=> d s51 1 f8

R e c o r d 1 o f 1

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Page: 1 of 1

AN: 23935341

AU: Lee, Harry Nai-Shee, 1942-

TI: Electrical transport properties of some hexagonal layered type
transition metal chalcogenides.

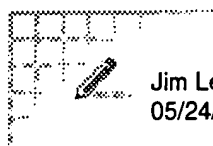
YR: 1969

LN: English

PT: Book

PH: ix, 83 l. charts, diagrs. 28 cm.

ATTACHMENT C



Jim Leonard
05/24/98 02:27 PM

To: Daniel P Morris/Watson/IBM@IBMUS
cc:
From:
Subject: Rare Earth Like or Type

Dan,

For Rare Earth Like or Type, here are some article abstracts. No books were found.

Article listing are from a search of INSPEC on DIALOG.

If citation information is needed, let me know.

All the best,

Jim

James W. Leonard, Reference Librarian, Watson Library Services. Room 16-240
IBM TJ Watson Research Center,
Route 134, Yorktown Hts. NY 10598.
jwl@us.ibm.com
Voice=(914) 945 3468; Fax=(914) 945 4144

File 2:INSPEC 1969-1998/May W3
(c) 1998 Institution of Electrical Engineers

Rare Earth like

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      103240 EARTH (January 1969)
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?•t 6/7/1-4

6/7/1
DIALOG(R)File 2:INSPEC
(c) 1998 Institution of Electrical Engineers. All rts. reserv.
01990663 INSPEC Abstract Number: A83018861

Title: Rare earths and actinides
Author(s): Coqblin, B.
Author Affiliation: Lab. de Phys. des Solides, Univ. Paris-Sud, Centre d'Orsay, Orsay, France
Journal: Journal of Magnetism and Magnetic Materials vol.29, no.1-3 p.1-19
Publication Date: Oct. 1982 Country of Publication: Netherlands
CODEN: JMMDC ISSN: 0304-8853
U.S. Copyright Clearance Center Code: 0304-8853/82/0000-0000/\$02.75
Conference Title: Proceedings of the 4th European Conference on Rare Earths and Actinides
Conference Date: 28-31 March 1982 Conference Location: Durham, UK
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Bibliography (B); General, Review (G)

Abstract: Reviews the different properties of rare-earths and actinides, either as pure metals or as in alloys or compounds. Three different cases are considered: (i) in the case of 'normal' rare-earths which are characterized by a valence of 3, the author discusses essentially the magnetic ordering, the coexistence between superconductivity and magnetism and the properties of amorphous rare-earth systems; (ii) in the case of 'anomalous' rare-earths, 'intermediate-valence' systems and 'Kondo' systems are distinguished. Special emphasis is given to the problems of the 'Kondo lattice' (for compounds such as $\text{CeAl}_{\text{sub } 2/}$, $\text{CeAl}_{\text{sub } 3/}$ or $\text{CeB}_{\text{sub } 6/}$) or the 'Anderson lattice' (for compounds such as TmSe). The problem of neutron diffraction in these systems is also discussed; and (iii) in the case of actinides, the d-f hybridized and almost magnetic metals at the beginning of the series are separated from the rare-earth like metals after americium. (193 Refs)

6/7/2

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

01381163 INSPEC Abstract Number: A79069701

Title: Magnetic properties of amorphous alloys of Fe and La, Lu, Y, and Zr
Author(s): Heiman, N.; Kazama, N.
Author Affiliation: IBM Res. Lab., San Jose, CA, USA
Journal: Physical Review B (Condensed Matter) vol.19, no.3 p.1623-32

Publication Date: 1 Feb. 1979 Country of Publication: USA

CODEN: PRBMDO ISSN: 0163-1829

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: In order to study the systematics of the Fe-Fe exchange in amorphous rare-earth-Fe alloys, without the complications associated with the magnetic characteristics of the rare-earth elements, amorphous films of Fe alloyed with La, Lu, Y, and Zr have been prepared with a wide range of Fe concentrations. Magnetization and Mossbauer-effect measurements were made. The magnetic properties of the alloys depended critically on the choice of rare earth (or rare-earth-like element). YFe and LuFe alloys were found to have spin-glass characteristics while LaFe and ZrFe alloys were found to be ferromagnetic, but with evidence that exchange fluctuations were nearly as large as the average exchange. Thus the nature of the Fe-Fe exchange interaction depends critically upon the species of the rare earth. The most important parameter in determining the magnetic behavior of these alloys appears to be the size of the rare-earth atom, with large rare-earth atoms resulting in a smaller ratio of exchange fluctuations to exchange. The same dependence of the magnetic properties upon rare-earth size appears to be important in the case of magnetic-rare-earth atoms; however, the effect of rare-earth-Fe exchange also becomes important and these effects are discussed. (30 Refs)

6/7/3
DIALOG(R)File 2:INSPEC
(c) 1998 Institution of Electrical Engineers. All rts. reserv.

00692540 INSPEC Abstract Number: A74076053
Title: Crystal fields in dilute rare-earth metals obtained from magnetization measurements on dilute rare-earth alloys
Author(s): Touborg, P.; Hog, J.
Author Affiliation: Tech. Univ., Lyngby, Denmark
Journal: Physical Review Letters vol.33, no.13 p.775-8
Publication Date: 23 Sept. 1974 Country of Publication: USA
CODEN: PRLTAO ISSN: 0031-9007
Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: Measurements of the crystal field parameters of rare earth metals can be obtained by diluting the rare earths in nonmagnetic rare earth-like hosts. Alloys of terbium, dysprosium, and erbium with scandium, yttrium and lutetium hosts were prepared and crystal field parameters determined from magnetisation measurements. An unsystematic relationship was found between crystal field parameters and rare earth atomic number. (17 Refs)

6/7/4
DIALOG(R)File 2:INSPEC
(c) 1998 Institution of Electrical Engineers. All rts. reserv.

00258862 INSPEC Abstract Number: A71036349
Title: The effective size of americium dissolved in lanthanum (and superconducting transition temperature of La-Al alloys)
Author(s): Hill, H.H.; Ellinger, F.H.
Journal: Journal of the Less-Common Metals vol.23, no.1 p.92-4
Publication Date: Jan. 1971 Country of Publication: Switzerland
CODEN: JCOMAH ISSN: 0022-5088
Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: The lattice parameters of alloys of f.c.c. beta -La containing 1.25 to 3.70 at% Am are determined by X-ray analysis. It is found that the effective ionic size of the dissolved Am is very close to that of elemental Am itself. The unusually weak depression of the superconducting transition temperature of beta -La caused by the addition of small amounts of Am is discussed. It is suggested that Am ions in La exhibit rare earth-like characteristics of trivalency and a localized d-electron configuration. (11 Refs)

Rare Earth type

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      103240 EARTH (January 1969)
      419473 TYPE
      S7 10 RARE()EARTH()TYPE
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      10 S7
      2642109 PY=1969 : PY=1985
      S8 3 S7 AND PY=1969:1985
?*t 8/7/1-3
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8/7/1
DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

00926715 INSPEC Abstract Number: A76057644

Title: Lattice parameter variations in the rare earth type B and C structures

Author(s): Ferguson, I.F.

Author Affiliation: RFL, Springfields, UK

Conference Title: UKAEA Diffraction Analysis Conference, the Role of Diffraction and Electron Analysis in the Fast Reactor p.25

Editor(s): Ferguson, I.F.

Publisher: UKAEA, Warrington, Lancs., UK

Publication Date: 1975 Country of Publication: UK 74 pp.

Conference Date: 15-17 Oct. 1974 Conference Location: Dounreay, UK

Language: English Document Type: Conference Paper (PA)

Treatment: Experimental (X)

Abstract: The lattice parameters of monoclinic europia have been determined and contrasted with a range of solid solutions which have the same Rare Earth type B structure as europia. These solid solutions were based upon samaria and gadolinia which lie on either side of europia in the lanthanide series. Curiously, europia does not lie where it would be expected to lie on the lattice parameter plots on the basis of its ionic radius. This is attributed to its position in the middle of the lanthanide series. For the lanthanide oxides with the cubic Rare Earth type C structure an anomaly again occurs, but this time for gadolinia. (0 Refs)

8/7/2

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

00279317 INSPEC Abstract Number: A71048689, B71021928

Title: Cast permanent magnets of cobalt, copper, and cerium: process and performance characteristics

Author(s): Cullen, T.J.

Author Affiliation: Sel-Rex Corp., Nutley, NJ, USA

Journal: Journal of Applied Physics vol.42, no.4 p.1535-6

Publication Date: 15 March 1971 Country of Publication: USA

CODEN: JAPIAU ISSN: 0021-8979

Conference Title: 16th annual conference on magnetism and magnetic materials

Conference Date: 17-20 Nov. 1970 Conference Location: Miami Beach, FL, USA

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Experimental (X)

Abstract: A process for casting magnets of the cobalt, copper, rare-earth type weighing as much as several pounds has been developed. The characteristics of the alloys are highly reproducible between castings. The uniformity of performance within a casting is excellent. The residual induction of a typical cerium alloy casting is 5600 G. The coercive force is 4800 Oe. The variation of induction with temperature in the region of a load line of 2, is 0.08%/ degrees C from room temperature to 100 degrees C.

8/7/3

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

00125174 INSPEC Abstract Number: A70028540

Title: Magnetic properties of erbium ferrite

Author(s): Apostolov, A.

Author Affiliation: Sofia Univ., Bulgaria

Journal: Comptes Rendus de l'Academie Bulgare des Sciences vol.22, no.9 p.995-8

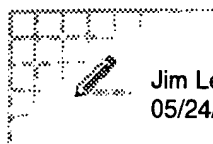
Publication Date: 1969 Country of Publication: Bulgaria

CODEN: CRABAA ISSN: 0366-8681

Language: English Document Type: Journal Paper (JP)

Abstract: Erbium ferrite ErFeO_3 is of the rare-earth type with an orthorhombic deformation and spatial group Pbnm . The authors investigate the antiferromagnetism of the rare earth around the antiferromagnetic point of Neel for erbium ions, for which they measured the magnetic properties of the substance in the entire range between 2 degrees K and 1200 degrees K.

ATTACHMENT D



Jim Leonard
05/24/98 02:22 PM

To: Daniel P Morris/Watson/IBM@IBMUS
cc:
From:
Subject: Perovskite Like and Type

Dan,

For Perovskite Like or Type, here are some article abstracts and some books.

Article listing are from a search of INSPEC on DIALOG, and the book listings are from searching the EPIC OCLC database.

If citation information is needed, let me know.

All the best,

Jim

James W. Leonard, Reference Librarian, Watson Library Services. Room 16-240
IBM TJ Watson Research Center,
Route 134, Yorktown Hts. NY 10598.
jwl@us.ibm.com
Voice=(914) 945 3468; Fax=(914) 945 4144

File 2:INSPEC 1969-1998/May W3
(c) 1998 Institution of Electrical Engineers

| Set | Items | Description |
|-----|-------|-------------|
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Perovskite like

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2/7/1
DIALOG(R)File 2:INSPEC
(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02785278 INSPEC Abstract Number: A87006595

Title: Crystal-chemical features and properties of layered bismuth vanadate-titanate

Author(s): Osipyan, V.G.; Savchenko, L.M.; Kostanyan, K.A.

Journal: Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy
vol.21, no.11 p.1924-7

Publication Date: Nov. 1985 Country of Publication: USSR

CODEN: IVNMAW ISSN: 0002-337X

Translated in: Inorganic Materials vol.21, no.11 p.1676-9

Publication Date: Nov. 1985 Country of Publication: USA

CODEN: INOMAF ISSN: 0020-1685

U.S. Copyright Clearance Center Code: 0020-1685/85/2111-1676\$09.50

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: It has been established that $\text{Bi}_{13}\text{V}_5\text{TiO}_{34}$ belongs to the ferroelectric family of bismuth-containing compounds with a layered compound. The formula unit $\text{Bi}_{2/11}\text{V}_5\text{Ti}_{1/6}\text{O}_{5/23}$ corresponds to a layered structure of $(\text{Bi}_{2/11}\text{O}_{5/23})_{2+}$ with one perovskite-like layer between ions of bismuthyl $(\text{Bi}_{2/11}\text{O}_{5/23})_{2+}$. The dielectric properties indicate that $\text{Bi}_{13}\text{V}_5\text{TiO}_{34}$ has ferroelectric properties. The solid-phase process of formation of the compound from a mixture of the initial oxides takes place in one stage in the temperature range 600-800 degrees C. (8 Refs)

2/7/2

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02777488 INSPEC Abstract Number: A87003002

Title: Some optical and electrophysical properties of complexly substituted phases based on $\text{A}_2\text{B}_2\text{O}_7$ perovskite-like ferroelectrics

Author(s): Titov, Yu.A.; Leonov, A.P.; Sych, A.M.; Stefanovich, S.Yu.; Lashneva, V.V.; Venevtsev, Yu.N.

Author Affiliation: T.G. Shevchenko Kiev State Univ., Ukrainian SSR, USSR

Journal: Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy
vol.21, no.10 p.1739-43

Publication Date: Oct. 1985 Country of Publication: USSR

CODEN: IVNMAW ISSN: 0002-337X

Translated in: Inorganic Materials vol.21, no.10 p.1515-19

Publication Date: Oct. 1985 Country of Publication: USA

CODEN: INOMAF ISSN: 0020-1685

U.S. Copyright Clearance Center Code: 0020-1685/85/2110-1515\$09.50

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The purpose of the present work was to precisely determine whether the structures of the complexly substituted phases are centro- or noncentrosymmetric and to evaluate some of the ferroelectric and thermal characteristics and electrical-conduction properties. The investigations of the electrophysical characteristics were carried out on ceramic samples in the form of tablets with silver electrodes. The density of the ceramics was 0.7-0.8 of the X-ray density. The differential thermal analysis in the 1000-2400 degrees C temperature range was carried out on a system based on a high-temperature furnace with a tungsten heating element. The study of the nonlinear-optical properties of the phases synthesized was carried out by a method involving the generation of the second optical harmonic of their laser emission according to the 'reflection' scheme. Samples with a grain diameter from 10 to 20 μ were used in this case. (8 Refs)

2/7/3

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02697831 INSPEC Abstract Number: A86086709

Title: Compositions and electrical properties of complex bismuth layer-structured ferroelectric ceramics

Author(s): Takenaka, T.; Sakata, K.

Author Affiliation: Fac. of Sci. & Technol., Sci. Univ. of Tokyo, Chiba, Japan

Journal: Japanese Journal of Applied Physics, Supplement vol.24, suppl.24-3 p.117-19

Publication Date: 1985 Country of Publication: Japan

CODEN: JJPYA5 ISSN: 0021-4922

Conference Title: Proceedings of the 5th Meeting on Ferroelectric Materials and their Applications (FMA-5)

Conference Date: 29-31 May 1985 Conference Location: Kyoto, Japan

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The dielectric and piezoelectric properties of complex bismuth layer-structured ferroelectrics were studied. The Curie temperature T_{c} of solid solution systems based on $\text{PbBi}_{1-x}\text{Nb}_2\text{O}_{9-x}$ linearly increases as the tolerance factor for perovskite-like units of the layer structure rapidly decreases according to the increase of the substitution ion for Pb. A substitution of $(\text{NaBi})_{1-x}\text{Pb}_x$ for Pb in the solid solution $\text{Pb}_{1-x}(\text{NaBi})_x\text{Nb}_2\text{O}_9$ (PNBN-100x) system gives the elevated T_{c} and the easy poling process: $\text{Na}_{0.5}\text{Bi}_{0.5}\text{Nb}_2\text{O}_9$ has a very high Curie temperature of 785 degrees C. The coupling factor k_{33} of the hot-forged PNBN-50 is about 20%. (11 Refs)

2/7/4

DIALOG(R)File 2:INSPEC

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02693893 INSPEC Abstract Number: A86080922

Title: Growth and investigation of single crystals of $\text{Bi}_{1-x}\text{GeVO}_{10.5-x}$ and $\text{Bi}_{1-x}\text{P}_{2-x}\text{Ge}_{1+x}\text{O}_{24-x}$

Author(s): Firsov, A.V.; Bush, A.A.; Mirkin, A.E.; Venevtsev, Yu.N.

Author Affiliation: L.Ya. Karpov Sci. Res. Physicochem. Inst., Moscow, USSR

Journal: Kristallografiya vol.30, no.5 p.932-6

Publication Date: Sept.-Oct. 1985 Country of Publication: USSR

CODEN: KRISAJ ISSN: 0023-4761

Translated in: Soviet Physics - Crystallography vol.30, no.5 p.540-3

Publication Date: Sept.-Oct. 1985 Country of Publication: USA

CODEN: SPHCA6 ISSN: 0038-5638

U.S. Copyright Clearance Center Code: 0038-5638/85/050540-04\$03.90

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: By slow cooling of melts the authors have obtained single crystals of the phases $\text{Bi}_{1-x}\text{GeVO}_{10.5-x}$ and $\text{Bi}_{1-x}\text{P}_{2-x}\text{Ge}_{1+x}\text{O}_{24-x}$ ($x=0.25$). They have monitored the chemical composition of the crystals, and have investigated them by X-ray diffraction, IR spectroscopy, and examination of their dielectric and pyroelectric properties. They have obtained new data on the crystallographic characteristics of the phases, and have found that the crystals exhibit the pyroelectric effect at room temperature. By high-temperature X-ray diffraction, in crystals of the phase $\text{Bi}_{1-x}\text{GeVO}_{10.5-x}$ at 550K they find a first-order phase transition between the orthorhombic and tetragonal forms. The crystals of the phase $\text{Bi}_{1-x}\text{GeVO}_{10.5-x}$ are ferroelectrics with a Curie point of 550K. The crystals of this phase have a similar structure to crystals of bismuth compounds with layered perovskite-like structures. (9 Refs)

2/7/5

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02666118 INSPEC Abstract Number: A86064258

Title: Thermal expansion data. VIII. Complex oxides, $\text{ABO}/\text{sub } 3/$, the perovskites

Author(s): Taylor, D.

Author Affiliation: Fairey Tecramics Ltd., Filleybrooks, Stone, UK

Journal: Transactions and Journal of the British Ceramic Society
vol.84, no.6 p.181-8

Publication Date: Nov.-Dec. 1985 Country of Publication: UK

CODEN: TJBCAD ISSN: 0307-7357

Language: English Document Type: Journal Paper (JP)

Treatment: Bibliography (B); Theoretical (T)

Abstract: Gives regression data and percentage expansions for the following perovskites: $\text{AgNbO}/\text{sub } 3/$, $\text{AgTaO}/\text{sub } 3/$, $\text{BaBiO}/\text{sub } 3/$, $\text{BaFeO}/\text{sub } 3/$, $\text{BaPbO}/\text{sub } 3/$, $\text{BaSnO}/\text{sub } 3/$, $\text{BaTiO}/\text{sub } 3/$, $\text{BaZrO}/\text{sub } 3/$, $\text{BiFeO}/\text{sub } 3/$, $\text{CaMnO}/\text{sub } 3/$, $\text{Gd}/\text{sub } 0.1/\text{WO}/\text{sub } 3/$, $\text{KNbO}/\text{sub } 3/$, $\text{KTaO}/\text{sub } 3/$, $\text{LaAlO}/\text{sub } 3/$, $\text{LaCrO}/\text{sub } 3/$, $\text{LaMnO}/\text{sub } 3/$, $\text{LuCoO}/\text{sub } 3/$, $\text{NaMn}/\text{sub } 7/\text{O}/\text{sub } 12/$, $\text{MnNbO}/\text{sub } 3/$, $\text{Na}/\text{sub } 0.8/\text{WO}/\text{sub } 3/$, $\text{NdAlO}/\text{sub } 3/$, $\text{PbHfO}/\text{sub } 3/$, $\text{PbTiO}/\text{sub } 3/$, $\text{PbZrO}/\text{sub } 3/$, $\text{PrAlO}/\text{sub } 3/$, $\text{SrCeO}/\text{sub } 3/$, $\text{SrCoO}/\text{sub } 3/$, $\text{SrHfO}/\text{sub } 3/$, $\text{SrPbO}/\text{sub } 3/$, $\text{SrTiO}/\text{sub } 3/$, $\text{SrZrO}/\text{sub } 3/$, $\text{YCoO}/\text{sub } 3/$, $\text{YMnO}/\text{sub } 3/$, $\text{YbMnO}/\text{sub } 3/$ and for the perovskite-like compounds $\text{LiNbO}/\text{sub } 3/$ and $\text{LiTaO}/\text{sub } 3/$. (119 Refs)

2/7/6

DIALOG(R)File 2:INSPEC

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02650988 INSPEC Abstract Number: A86058958

Title: Formation of single crystals of the perovskite-like ferroelectric $\text{Pb}(\text{Mg}/\text{sub } 1/3/\text{Nb}/\text{sub } 2/3/)\text{O}/\text{sub } 3/$

Author(s): Petrovskii, G.T.; Bondar', I.A.; Andreev, E.M.; Koroleva, L.N.

Author Affiliation: I.V. Grebenshchikov Inst. of Silicate Chem., Acad. of Sci., USSR

Journal: Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy
vol.20, no.6 p.1067-70

Publication Date: June 1984 Country of Publication: USSR

CODEN: IVNMAW ISSN: 0002-337X

Translated in: Inorganic Materials vol.20, no.6 p.924-6

Publication Date: June 1984 Country of Publication: USA

CODEN: INOMAF ISSN: 0020-1685

U.S. Copyright Clearance Center Code: 0020-1685/84/2006-0924\$08.50

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Single crystals of LMN were synthesized by spontaneous crystallization from solution in a melt of lead oxide with added boron oxide. By varying the solvent content and the temperature regime over wide ranges, it was established that the optimal conditions for growing single crystals of LMN are 980-1100 degrees C and 50-60 mass % solvent. The resulting single crystals of lead magnesioniobate, when examined under the microscope, were seen to be isotropic, with good face development and high refractive index $n=2.60$. (7 Refs)

2/7/7

DIALOG(R)File 2:INSPEC

(c) 1998 Institution of Electrical Engineers. All rts. reserv.

02640282 INSPEC Abstract Number: A86052249

Title: Sintering and microstructure of bismuth-containing ferroelectric

ceramics

Author(s): Osipyan, V.G.; Freidenfel'd, E.Zh.

Author Affiliation: Riga Polytech. Inst., Latvian SSR, USSR

Journal: Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy
vol.20, no.7 p.1211-13

Publication Date: July 1984 Country of Publication: USSR

CODEN: IVNMAW ISSN: 0002-337X

Translated in: Inorganic Materials vol.20, no.7 p.1043-5

Publication Date: July 1984 Country of Publication: USA

CODEN: INOMAF ISSN: 0020-1685

U.S. Copyright Clearance Center Code: 0020-1685/84/2007-1043\$08.50

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: In the study of the sintering kinetics for ceramics based on bismuth-containing ferroelectric compounds with a layer perovskite-like structure, the liquid phase character of the process has been established. By modification and addition of the original oxides over stoichiometry, a substantial reduction of the sintering temperature and expansion of the sintering temperature interval has been achieved for ceramics of compositions $\text{Bi}_{3/2}\text{TiNbO}_9$ and $\text{Na}_{0.5}\text{Bi}_{4.5}\text{Ti}_4\text{O}_{15}$. This is explained from the viewpoint of vacancy defect theory. The microstructure of bismuth-containing ferroelectric ceramics is formed from needle-shaped grains; this is due to preferential crystal growth in bismuth-containing compounds along the longer axes of the unit cells in these compounds. (8 Refs)

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DIALOG(R)File 2:INSPEC

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02624075 INSPEC Abstract Number: A86039596

Title: Role of steric factors in ionic mobility processes in compounds having a perovskite-like structure

Author(s): Voronov, V.N.; Aleksandrov, K.S.

Author Affiliation: L.V. Kirenski Inst. of Phys., Acad. of Sci., Krasnoyarsk, USSR

Journal: Fizika Tverdogo Tela vol.27, no.7 p.1968-76

Publication Date: July 1985 Country of Publication: USSR

CODEN: FTVTAC ISSN: 0367-3294

Translated in: Soviet Physics - Solid State vol.27, no.7 p.1182-7

Publication Date: July 1985 Country of Publication: USA

CODEN: SPSSA7 ISSN: 0038-5654

U.S. Copyright Clearance Center Code: 0038-5654/85/071182-06\$03.90

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T); Experimental (X)

Abstract: In the search for new solid electrolytes, an attempt was made at a quantitative allowance for known influences on the mobility. The parameter $\rho_{ij} = R_{ij} / \sigma_{ij}^{1/3}$ was used, representing intermediate positions of type j for a mobile ion of type i. An analysis of ρ_{ij} in the case of halides with a perovskite-like structure showed that fluorine anions are much more mobile than cations or the other halogen anions. Ranges of existence were found for the fluorides promising as solid electrolytes, and such compounds were synthesized and investigated. In the elpasolite and cryolite structures, ρ_{ij} has two values corresponding to the two observed types of motion. A comparison of the temperatures T_{ij} at which motion begins with the calculated ρ_{ij} gave an empirical relation $T_{ij} = T_{mp} - \beta \rho_{ij}$. No dependence of β approximately=700 degrees on the kinds of ion circumscribing the intermediate position, or on the type of the mobile ion, was found for any of the compounds studied. (32 Refs)

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DIALOG(R)File 2:INSPEC

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02611546 INSPEC Abstract Number: A86033506

Title: Microdomains in the reduction of $\text{Ca}/\text{sub } 2/\text{LaFe}/\text{sub } 3/\text{O}/\text{sub } 8+z/$

Author(s): Gonzalez-Calbet, J.M.; Vallet-Regi, M.; Alario-Franco, M.A.

Author Affiliation: Dept. de Quimica Inorg., Univ. Complutense, Madrid, Spain

Journal: Journal of Solid State Chemistry vol.60, no.3 p.320-31

Publication Date: Dec. 1985 Country of Publication: USA

CODEN: JSSCBI ISSN: 0022-4596

U.S. Copyright Clearance Center Code: 0022-4596/85\$3.00

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The reduction of $\text{Ca}/\text{sub } 2/\text{LaFe}/\text{sub } 3/\text{O}/\text{sub } 8+z/$ in the electron microscope shows this solid to decompose into $\text{Ca}/\text{sub } 2/\text{Fe}/\text{sub } 2/\text{O}/\text{sub } 5/$ and $\text{LaFeO}/\text{sub } 3/$, two perovskite-related line-phases which, under these conditions, appear to be thermodynamically more stable. In kinetic terms, the decomposition appears to be of the nucleation and growth type. Microdomains appear to be an essential characteristic of the system since they are present in both the reactants and the reaction products. Up to nine sets of structurally-related microdomains can simultaneously be present within the same crystal. This leads to quite elaborate electron diffraction patterns which can be interpreted in terms of perovskite superstructures. These results are discussed in terms of diffusion data on perovskite-like ferrites. (16 Refs)

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DIALOG(R)File 2:INSPEC

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02600371 INSPEC Abstract Number: A86027018

Title: Crystal-chemical conditions for formation of new layered compounds of bismuth

Author(s): Korzunova, L.V.; Osipyan, V.G.; Shebanov, L.A.; Freidenfel'd, E.Zh.

Journal: Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy vol.20, no.12 p.2074-6

Publication Date: Dec. 1984 Country of Publication: USSR

CODEN: IVNMAW ISSN: 0002-337X

Translated in: Inorganic Materials vol.20, no.12 p.1813-15

Publication Date: Dec. 1984 Country of Publication: USA

CODEN: INOMAF ISSN: 0020-1685

U.S. Copyright Clearance Center Code: 0020-1685/84/2012-1813\$08.50

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The family of layered perovskite-like bismuth compounds (LPBC), first discussed by Aurivillius (1949), has the general formula $(\text{Bi}/\text{sub } 2/\text{O}/\text{sub } 2/)/\text{sup } 2+/(A/\text{sub } n-1/B/\text{sub } n/\text{O}/\text{sub } 3n+1/)/\text{sup } 2-/$ where A is $\text{Ca}/\text{sup } 2+/, \text{Ba}/\text{sup } 2+/, \text{Pb}/\text{sup } 2+/$ and other ions of the corresponding size; B is $\text{Ti}/\text{sup } 4+/, \text{Nb}/\text{sup } 5+/, \text{Ta}/\text{sup } 5+/, \text{W}/\text{sup } 6+/$ and other ions capable of forming oxygen octahedra; and $n=1, 2, 3, \dots$ represents the number of perovskite-like layers between the bismuthyl layers $(\text{Bi}/\text{sub } 2/\text{O}/\text{sub } 2/)/\text{sup } 2+/. The authors discuss problems arising in the formation of new layered bismuth compounds $\text{Bi}/\text{sub } 2/A/\text{sub } n-1/B/\text{sub } n/\text{O}/\text{sub } 3n+3/$ from two others with different numbers of perovskite-like layers n . (11 Refs)$

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DIALOG(R)File 2:INSPEC

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00530722 INSPEC Abstract Number: A73043864

Title: The $\text{SrMnO}/\text{sub } 3\text{-x}/\text{-Mn}/\text{sub } 3/\text{O}/\text{sub } 4/$ system

Author(s): Negas, T.

Author Affiliation: Nat. Bur. Stand., Washington, DC, USA

Journal: Journal of Solid State Chemistry vol.7, no.1 p.85-8

Publication Date: May 1973 Country of Publication: USA

CODEN: JSSCBI ISSN: 0022-4596

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Phase relations were determined in the $\text{SrMnO}/\text{sub } 3\text{-x}/\text{-Mn}/\text{sub } 3/\text{O}/\text{sub } 4/$ system at elevated temperatures in air using quenching, gravimetric, and X-ray diffraction techniques. The system contains one intermediate compound, $\text{SrMn}/\text{sub } 3/\text{O}/\text{sub } 6\text{-x}/$ ($0 < x < 0.10$ between 900-1200 degrees C), which decomposes to $\text{SrMnO}/\text{sub } 3\text{-x}/$ plus $\text{Mn}/\text{sub } 3/\text{O}/\text{sub } 4/$ near 1215 degrees C. The existence of an oxygen deficient $\text{SrMnO}/\text{sub } 3\text{-x}/$ having the hexagonal 4-layer structure was confirmed. Crystals of perovskite-like $\text{SrMnO}/\text{sub } 3\text{-x}/$ ($x > 0.25$) were grown from its primary field located in the system.

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DIALOG(R)File 2:INSPEC

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00506189 INSPEC Abstract Number: A73027443, B73016495

Title: Mossbauer studies of some perovskite-like layer-type ferroelectrics

Author(s): Sultanov, G.D.; Mirishli, F.A.; Ismailzade, I.H.

Author Affiliation: Inst. Theoretical Problems Chem. Technol., Acad. Sci., Azerbaijan SSR, USSR

Journal: Acta Crystallographica, Section A (Crystal Physics, Diffraction, Theoretical and General Crystallography) vol.A28, pt.4, suppl. p.S241

Publication Date: 15 July 1972 Country of Publication: Denmark

CODEN: ACACBN ISSN: 0567-7394

Conference Title: 9th International Congress of Crystallography of the International Union of Crystallography. Abstracts only

Conference Sponsor: Internat. Union of Crystallography

Conference Date: 26 Aug.-7 Sept. 1972 Conference Location: Kyoto, Japan

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Experimental (X)

Abstract: In the layer-type ferroelectrics the entrance of the large cations A, having noticeably different from $\text{Bi}/\text{sup } 3+/$ polarizability and sizes, into the octahedral emptiness of the perovskite-like packages stipulates changing of the electric field gradient on the nuclei in the oxygen octahedra. This effect has been investigated by the Mossbauer spectra of $\text{Fe}/\text{sup } 57/$ in the layer-type ferroelectrics $\text{Bi}/\text{sub } 2/\text{Bi}/\text{sub } 4/\text{Ti}/\text{sub } 3/\text{Fe}/\text{sub } 2/\text{O}/\text{sub } 18/$ (A), $(\text{PrBi})\text{Bi}/\text{sub } 4/\text{Ti}/\text{sub } 3/\text{Fe}/\text{sub } 2/\text{O}/\text{sub } 18/$ (B), $\text{Pr}/\text{sub } 2/\text{Bi}/\text{sub } 4/\text{Ti}/\text{sub } 3/\text{Fe}/\text{sub } 2/\text{O}/\text{sub } 18/$ (C) at temperatures between 80 degrees K and 1150 degrees K. For the crystals B and C the weak lines of the magnetic splitting conditioned by some second (Magnetooordered) phase are observed. According to temperature of disappearance of the quadrupole splitting in A, B, and C crystals the Curie temperatures of these ferroelectrics 1075 degrees K, 1050 degrees K and 900 degrees K have been determined. The Mossbauer measurements show some anomalous variation of the isomer shift around the Curie points.

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DIALOG(R)File 2:INSPEC

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00504369 INSPEC Abstract Number: A73027007

Title: High pressure synthesis and crystal structure of NaMn/sub 7/O/sub 12/

Author(s): Marezio, M.; Dernier, P.D.; Chenavas, J.; Joubert, J.C.

Author Affiliation: Bell Telephone Labs., Murray Hill, NJ, USA

Journal: Journal of Solid State Chemistry vol.6, no.1 p.16-20

Publication Date: Jan. 1973 Country of Publication: USA

CODEN: JSSCBI ISSN: 0022-4596

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: A new compound, NaMn/sub 7/O/sub 12/ with the perovskite-like arrangement has been synthesized at 80 kbar and 1000 degrees C. This compound is cubic, $a=7.3036$ AA space group Im3 with four formula weights per unit cell. The structure has been solved by Patterson and Fourier synthesis and refined by least-squares based on 142 reflections. The final R and wR factors were 0.025 and 0.033, respectively. The A sites of the perovskite structure are occupied by sodium and manganese atoms in an ordered fashion. The sodium atoms are each surrounded by a 12-oxygen polyhedron whereas the manganese atoms have four nearest oxygens at 1.909 AA forming a square and four more at 2.688 AA forming a rectangle perpendicular to the square. The distortion of the oxygen network from the ideal perovskite structure is similar to that found for In(OH)/sub 3/ and Sc(OH)/sub 3/. (13 Refs)

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DIALOG(R)File 2:INSPEC

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00461712 INSPEC Abstract Number: A72084489

Title: Infrared spectra of the rare earth perovskites LZO/sub 3/ (Z=Al, Cr, Fe, Co) (Crystal structure)

Author(s): Couzi, M.; Pham Van Huong

Author Affiliation: Univ. Bordeaux I, Talence, France

Journal: Journal de Chimie Physique et de Physico-Chimie Biologique vol.69, no.9 p.1339-47

Publication Date: Sept. 1972 Country of Publication: France

CODEN: JCPBAN ISSN: 0021-7689

Language: French Document Type: Journal Paper (JP)

Abstract: The infrared spectra, in the range from 800 to 40 cm/sup -1/ of perovskite-like aluminates LA1O/sub 3/ where L=La, Nd, Gd, Tb, Ho, Er, orthochromites LCrO/sub 3/ where L=La, Pr, Nd, Sm, Eu, Gd, Tb, Ho, Er, Tm, Yb, Lu and some similar compounds have been interpreted in connection with the structure of these crystals and by means of group factor analysis. Correlations have been established between the spectral evolution and the crystal distortion of these ionic compounds. (27 Refs)

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DIALOG(R)File 2:INSPEC

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00369712 INSPEC Abstract Number: A72025328

Title: Structural basis of ferroelectricity in the bismuth titanate family

Author(s): Newnham, R.E.; Wolfe, R.W.; Dorrian, J.F.

Author Affiliation: Pennsylvania State Univ., University Park, PA, USA

Journal: Materials Research Bulletin vol.6, no.10 p.1029-40

Publication Date: Oct. 1971 Country of Publication: USA

CODEN: MRBUAC ISSN: 0025-5408

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: More than fifty ferroelectrics belong to the Bi/sub 4/Ti/sub 3/O/sub 12/ family, and all consist of Bi/sub 2/O/sub 2/ layers interleaved with perovskite-like M/sub n-1/R/sub n/O/sub 3n+1/ layers. Crystal structures of three members of the family have been refined from X-ray and

neutron diffraction data, elucidating the distortions responsible for ferroelectricity. Bi/sub 2/WO/sub 6/(n=1) is orthorhombic, space group B2cb; Bi/sub 3/TiNbO/sub 9/ (n=2) orthorhombic, A2/sub 1/am; Bi/sub 4/Ti/sub 3/O/sub 12/ (n=3) monoclinic, Pc, but very nearly orthorhombic, B2cb. Similar distortions occur in all three structures, with large rotational motions accompanying the polarization along a. Below the transition, a strong Bi-O bond is formed to the apex oxygen of the perovskite layer, tilting the octahedra and producing antiparallel shifts along b. Symmetry differences in the even- and odd-layered compounds can be explained by the type of strains produced in the perovskite layer. The octahedral cations (W, Ti, Nb) are the major contributors to the spontaneous polarization, moving about 0.4 AA toward an octahedral edge. (16 Refs)

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DIALOG(R)File 2:INSPEC

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00359917 INSPEC Abstract Number: A72019058

Title: The crystal structures of orthorhombic SmAlO/sub 3/ and of trigonal NdAlO/sub 3/

Author(s): Marezio, M.; Dernier, P.D.; Remeika, J.P.

Author Affiliation: Bell Telephone Labs., Murray Hill, NJ, USA

Journal: Journal of Solid State Chemistry vol.4, no.1 p.11-19

Publication Date: Jan. 1972 Country of Publication: USA

CODEN: JSSCBI ISSN: 0022-4596

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The structures of NdAlO/sub 3/ and SmAlO/sub 3/ have been refined with precision from single crystal X-ray data. Both compounds have the perovskite-like arrangement. In the trigonal NdAlO/sub 3/ (space group R3c) the neodymium atoms have coordination number 12, the average Nd-O distance being 2.660 AA. The aluminum atoms are surrounded by a trigonally distorted octahedron, with an average Al-O distance of 1.896 AA. In the orthorhombic SmAlO/sub 3/, the samarium atoms are surrounded by 12-oxygen polyhedra but the coordination is slightly less than 12. The average Sm-O distance is 2.658 AA. The results indicate that with the orthorhombic to trigonal transition, the distortion of the rare earth polyhedron decreases, whereas that of the aluminium octahedron increases slightly. The overall distortion of the structure decreases. A comparison of the SmAlO/sub 3/ structure with that of its iron counterpart shows that the distortion from the ideal cubic perovskite structure is quite different. Therefore, the two compounds cannot be considered truly isostructural. (17 Refs)

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DIALOG(R)File 2:INSPEC

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00310268 INSPEC Abstract Number: A71069671

Title: Investigation of polarization non-linearity near the phase transition in perovskite-like ferroelectrics, using an anharmonic oscillator model

Author(s): Fritsberg, V.Ya.

Book Title: Phase transitions in ferroelectrics p.7-21

Editor(s): Fritsberg, V.Ya.; Rolov, B.N.; Kruchan, Ya.Ya.

Publisher: Zinatne, Riga, Latvia, USSR

Publication Date: 1971 Country of Publication: USSR 205 pp.

Language: Russian Document Type: Book Chapter (BC)

Treatment: Theoretical (T)

Abstract: An analysis of the anharmonic oscillator model, as applied to the unit cell of perovskite-like lattices. The method of Boguslawski has been used to derive a microscopic concept of the coefficients A and B,

expanded in a series of the $E=AP+BP/\text{sup } 3/$ type, which is extended to the paraelectric state of the ferroelectric. The results are compared with experimental data (of Kirilov et al., Izv.AN SSSR, ser. fiz, 31, 1835, 1967) on the $(\text{Ba},\text{Sr})\text{TiO}/\text{sub } 3/$ system. (23 Refs)

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DIALOG(R)File 2:INSPEC

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00256308 INSPEC Abstract Number: A71033281

Title: The bond lengths in $\text{LaFeO}/\text{sub } 3/$

Author(s): Marezio, M.; Dernier, P.D.

Author Affiliation: Bell Telephone Labs. Inc., Murray Hill, NJ, USA

Journal: Materials Research Bulletin vol.6, no.1 p.23-9

Publication Date: Jan. 1971 Country of Publication: USA

CODEN: MRBUAC ISSN: 0025-5408

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: The crystal structure of $\text{LaFeO}/\text{sub } 3/$ has been refined from X-ray data taken from a highly twinned crystal. The least-squares refinement was carried out on 695 independent reflections which gave an R index of 0.035. $\text{LaFeO}/\text{sub } 3/$ has the orthorhombic perovskite-like structure, though the rare earth polyhedron is quite distorted relative to the ideal cubic arrangement. The results indicate that in contrast to the other members of the orthoferrite series the coordination number of the lanthanum atoms is no longer 8. The Fe octahedron is only slightly distorted and the average Fe-O and O-O distances are 2.006 AA and 2.837 AA, respectively.

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DIALOG(R)File 2:INSPEC

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00230804 INSPEC Abstract Number: A71016204

Title: High-pressure transformations in $\text{SrGeO}/\text{sub } 3/$, $\text{SrSiO}/\text{sub } 3/$, $\text{BaGeO}/\text{sub } 3/$, and $\text{BaSiO}/\text{sub } 3/$

Author(s): Shimizu, Y.; Syono, Y.; Akimoto, S.

Author Affiliation: Univ. Tokyo, Roppongi, Minato-ku, Japan

Journal: High Temperatures - High Pressures vol.2, no.1 p.113-20

Publication Date: 1970 Country of Publication: UK

CODEN: HTHPAK ISSN: 0018-1544

Language: English Document Type: Journal Paper (JP)

Abstract: The stability relations of $\text{SrGeO}/\text{sub } 3/$, $\text{BaGeO}/\text{sub } 3/$, $\text{SrSiO}/\text{sub } 3/$, and $\text{BaSiO}/\text{sub } 3/$ were studied in the range 650-1400 degrees C and 0-120 kbar. The atmospheric-pressure phases of $\text{SrGeO}/\text{sub } 3/$, $\text{BaGeO}/\text{sub } 3/$, and $\text{SrSiO}/\text{sub } 3/$ with the pseudowollastonite structure all transformed to a new phase with pseudo-orthorhombic symmetry at approximately 10-34 kbar. Above 50 kbar, a cubic perovskite structure of $\text{SrGeO}/\text{sub } 3/$ was obtained. A large density change (46% in total) was observed through the high-pressure transformations of $\text{SrGeO}/\text{sub } 3/$. $\text{BaGeO}/\text{sub } 3/$ was found to transform to 9H-type and 4H-type-like hexagonal perovskite-like structures above 95 kbar. The density increase in the transformation of $\text{BaGeO}/\text{sub } 3/$ from the pseudowollastonite structure to the perovskite-like structures was approximately 40%. A transformation from the atmospheric-pressure orthorhombic phase to an undetermined structure was found in $\text{BaSiO}/\text{sub } 3/$ at moderately high pressures. (11 Refs)

2/7/126

DIALOG(R)File 2:INSPEC

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00167649 INSPEC Abstract Number: A70055719

Title: Electron diffraction investigation of phase transformations in thin films of tantalum oxide with perovskite-like structure

Author(s): Khitrova, V.I.; Pinsker, Z.G.

Journal: Kristallografiya vol.15, no.3 p.540-6

Publication Date: May 1970 Country of Publication: USSR

CODEN: KRISAJ ISSN: 0023-4761

Language: Russian Document Type: Journal Paper (JP)

Abstract: The method of electron diffraction structural analysis is applied to the investigation of phases in a series of cubic tantalum oxides with a perovskite-like structure and having a cell period of 7.75 AA. The analysis of the structure is accomplished by section of the three-dimensional Fourier potential series. It is found that because of appreciable change in the coordinates of the oxygen atoms, distortions of the structure occur, and the space group of the structure as a whole is Pmmm. Atomic coordinates are given. (11 Refs)

2/7/127

DIALOG(R)File 2:INSPEC

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53760 INSPEC Abstract Number: A69035241

Title: Structure relations of hexagonal perovskite-like compounds ABX/sub 3/ at high pressure

Author(s): Syono, Y.; Akimoto, S.; Kohn, K.

Author Affiliation: Univ. Tokyo, Roppongi, Minato-ku, Japan

Journal: Journal of the Physical Society of Japan vol.26, no.4 p. 993-9

Publication Date: April 1969 Country of Publication: Japan

CODEN: JUPSAU ISSN: 0031-9015

Language: English Document Type: Journal Paper (JP)

Abstract: Phase stability relations among four hexagonal perovskite-like structures as well as the cubic perovskite structure have been studied for several oxides (BaMnO/sub 3/ and SrMnO/sub 3/) and fluorides (CsMnF/sub 3/, RbNiF/sub 3/ and TlNiF/sub 3/) at high pressure. A series of high pressure transformations are found to occur in the order of the packing sequence along the hexagonal c axis (or cubic 111 axis) of (ab), (ababcbac), (abac), (abcbac) and (abc) with increasing pressure. This order is corresponding with the increasing order of the proportion of the cubic close-packed layers in the hexagonal close-packed structure. It is suggested that the tolerance factor of the perovskite structure and the Coulomb repulsive force play an important role in determining the crystal structure and its order in the series of phase transformations at high pressure.

Perovskite type

?s perovskite()type

8133 PEROVSKITE

419473 TYPE

S3 1388 PEROVSKITE()TYPE

?s s3 and py=1969:1985

1388 S3

2642109 PY=1969 : PY=1985

S4 515 S3 AND PY=1969:1985

?t 4/7/1-5,510-515

4/7/1

DIALOG(R)File 2:INSPEC

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02785243 INSPEC Abstract Number: A87007649

Title: X-ray and dielectric characteristics of new antiferroelectrics
 $\text{Pb}(\text{B}/\text{sub } 1/2/\text{Sb}/\text{sub } 1/2/)\text{O}/\text{sub } 3/$

Author(s): Danilenko, I.N.; Politova, E.D.; Abramova, A.N.; Ivanov, S.A.; Venevtsev, Yu.N.

Author Affiliation: L.Ya. Karpov Sci.-Res. Phys. Chem. Inst., Moscow, USSR

Journal: Izvestiya Akademii Nauk SSSR, Neorganicheskie Materialy
vol.21, no.8 p.1407-10

Publication Date: Aug. 1985 Country of Publication: USSR

CODEN: IVNMAW ISSN: 0002-337X

Translated in: Inorganic Materials vol.21, no.8 p.1233-6

Publication Date: Aug. 1985 Country of Publication: USA

CODEN: INOMAF ISSN: 0020-1685

U.S. Copyright Clearance Center Code: 0020-1685/85/2108-1233\$09.50

Language: English Document Type: Journal Paper (JP)

Treatment: New Developments (N); Experimental (X)

Abstract: Compounds of the composition $\text{Pb}(\text{B}/\text{sub } 1/2//\text{sup } 3+/\text{Sb}/\text{sub } 1/2/)\text{O}/\text{sub } 3/$ were synthesized, where $\text{B}/\text{sup } 3+/\text{=Sc, Lu, Yb, Tm, Er, and Ho}$ with a tendency toward the perovskite-type structure. Structural phase transformations were discovered, which are accompanied with anomalous dielectric properties. The new compounds are antiferroelectric with Curie temperatures below 330-458K. (7 Refs)

4/7/2

DIALOG(R)File 2:INSPEC

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02757758 INSPEC Abstract Number: A86117797

Title: Structural aspects of perovskite-type compounds. Symmetry changes in $\text{SrCeO}/\text{sub } 3/$ and its solid solutions

Author(s): de Pretis, A.; Minichelli, D.; Ricciardiello, F.

Author Affiliation: Istituto di Chimica Applicata e Ind., Trieste Univ., Italy

Journal: Revue Internationale des Hautes Temperatures et des Refractaires
vol.22, no.3-4 p.215-19

Publication Date: 1985 Country of Publication: France

CODEN: RIHTAV ISSN: 0035-3434

Language: English Document Type: Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Many $\text{ABO}/\text{sub } 3/$ perovskite-type compounds exhibit an orthorhombic symmetry with a approximately=b and c approximately=a square root 2 axis length. An important exception is the compound $\text{SrCeO}/\text{sub } 3/$ which exhibits a strongly distorted perovskite-type structure with 2 approximately=b. However, the doubling of the b axis in $\text{SrCeO}/\text{sub } 3/$ disappears both in the $\text{SrCeO}/\text{sub } 3/-\text{SrZrO}/\text{sub } 3/$ and in the $\text{SrCeO}/\text{sub } 3/-\text{BaZrO}/\text{sub } 3/$ solid solutions in all the compositions differing from the stoichiometric $\text{SrCeO}/\text{sub } 3/$. (8 Refs)

4/7/3

DIALOG(R)File 2:INSPEC

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02730414 INSPEC Abstract Number: A86104414

Title: New seignettomagnets with perovskite type structure

Author(s): Venevtsev, Yu.N.; Zhitomirsky, I.D.; Gagulin, V.V.; Sevastyanova, L.G.; Burdina, K.P.

Author Affiliation: L.Ya. Karpov Inst. of Phys. Chem., Moscow, USSR

Journal: Japanese Journal of Applied Physics, Supplement vol.24,
suppl.24-2 p.1063-5

Publication Date: 1985 Country of Publication: Japan

CODEN: JJPYA5 ISSN: 0021-4922
Conference Title: Proceedings of the Sixth International Meeting on
Ferroelectricity
Conference Sponsor: IUPAP; Int. Union Crystallogr.; Crystallogr. Soc.
Japan
Conference Date: 12-16 Aug. 1985 Conference Location: Kobe, Japan
Language: English Document Type: Conference Paper (PA); Journal Paper
(JP)
Treatment: Experimental (X)
Abstract: Physical properties and phase transitions of 10 complex metal
oxides of perovskite type have been studied. Some of them have been
identified as seignettomagnets, ferrimagnets, antiferromagnets. (10 Refs)

4/7/4
DIALOG(R)File 2:INSPEC
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02722533 INSPEC Abstract Number: B86053876
Title: New ceramic electrode for piezoelectric buzzer
Author(s): Nomura, S.; Yoshino, H.; Yamashita, Y.
Author Affiliation: Toshiba Res. & Dev. Center, Toshiba Corp., Kawasaki,
Japan
Journal: Japanese Journal of Applied Physics, Supplement vol.24,
suppl.24-2 p.736-8
Publication Date: 1985 Country of Publication: Japan
CODEN: JJPYA5 ISSN: 0021-4922
Conference Title: Proceedings of the Sixth International Meeting on
Ferroelectricity
Conference Sponsor: IUPAP; Int. Union Crystallogr.; Crystallogr. Soc.
Japan
Conference Date: 12-16 Aug. 1985 Conference Location: Kobe, Japan
Language: English Document Type: Conference Paper (PA); Journal Paper
(JP)
Treatment: Practical (P); Experimental (X)
Abstract: Electrically conductive oxide electrodes were investigated, and
the piezoelectric characteristics were measured for lead zirconate titanate
(PZT) resonator with the conductive oxide electrodes. Printable pastes were
made using conductive oxides having perovskite type structure, such as
BaPbO/sub 3/, BaPb/sub 1.2/O/sub 3/, BaPb/sub 0.8/Bi/sub 0.2/O/sub 3/,
BaPb/sub 0.8/Sb/sub 0.2/O/sub 3/ and La/sub 0.5/Sr/sub 0.5/CoO/sub 3/, with
glass frits and organic vehicles. the electrical resistivities of these
pastes were measured at room temperature by four probe method, which were
1.4*10/sup -2/ ohm-cm for BaPbO/sub 3/ paste and 2.3*10/sup -2/ ohm-cm for
La/sub 0.5/Sr/sub 0.5/CoO/sub 3/ paste. The piezoelectric resonators were
obtained with Kp=39%, tan delta =3.2% and C=24nF for an electrode of
BaPbO/sub 3/ paste and with Kp=31%, tan delta =6.8% and C=39nF for an
electrode of La/sub 0.5/Sr/sub 0.5/CoO/sub 3/ paste. (8 Refs)

4/7/5
DIALOG(R)File 2:INSPEC
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02722499 INSPEC Abstract Number: A86093928, B86055736
Title: Optical detector using superconducting BaPb/sub 0.7/Bi/sub
0.3/O/sub 3/ (BPB) thin films
Author(s): Enomoto, Y.; Murakami, T.
Author Affiliation: Ibaraki Electr. Commun. Lab., NTT, Ibaraki, Japan
Journal: Japanese Journal of Applied Physics, Supplement vol.24,
suppl.24-2 p.471-3
Publication Date: 1985 Country of Publication: Japan
CODEN: JJPYA5 ISSN: 0021-4922
Conference Title: Proceedings of the Sixth International Meeting on

Ferroelectricity

Conference Sponsor: IUPAP; Int. Union Crystallogr.; Crystallogr. Soc. Japan

Conference Date: 12-16 Aug. 1985 Conference Location: Kobe, Japan

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Highly sensitive optical detectors have been fabricated by using perovskite type superconductor $\text{BaPb}/\text{sub } 0.7/\text{Bi}/\text{sub } 0.3/\text{O}/\text{sub } 3/$ (BPB) thin films. Optical signals create quasi-particles and induce changes in the superconducting order parameter. These changes are measured by tunneling junctions along grain boundaries in the BPB polycrystalline thin films. The sensitivity is about $10/\text{sup } 3/ \text{ V/W}$ in the 1.0 approximately $10 \mu \text{ m}$ wavelength range and they can respond up to 600 MHz at the wavelength of $3.2 \mu \text{ m}$. The observed results suggest that the BPB detectors are suitable for application in optical communication systems and infrared spectrometers. (7 Refs)

4/7/510

DIALOG(R)File 2:INSPEC

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00070494 INSPEC Abstract Number: A69045389

Title: Millimeter wave e.s.r. studies of ferric iron in perovskite-type oxides

Author(s): Pontin, R.G.; Slade, E.F.; Ingram, D.J.E.

Author Affiliation: Univ. Keele, UK

Journal: Journal of Physics C (Solid State Physics) vol.2, no.7 p. 1146-50

Publication Date: July 1969 Country of Publication: UK

CODEN: JPSOAW ISSN: 0022-3719

Language: English Document Type: Journal Paper (JP)

Abstract: The paramagnetic resonance spectrum of $\text{Fe}/\text{sup } 3+/$ in lead and strontium titanates has been studied at Q band and 70GHz, and at temperatures down to 4.2 degrees K. The zero-field splittings have been measured directly giving values of $1.06\text{+or-}0.05\text{cm}/\text{sup } -1/$ for lead titanate at room temperature and $2.698\text{+or-}0.006 \text{ cm}/\text{sup } -1/$ for strontium titanate. The spectrum for lead titanate can be fitted to a spin Hamiltonian with $g/\text{sub mod mod } /=g/\text{sub i}/=2.0$, $D=0.53 \text{ cm}/\text{sup } -1/$ and $a=2.70\text{+}10/\text{sup } -2/\text{cm}/\text{sup } -1/$ and a 20% increase in the zero-field splitting parameter is observed on cooling from room temperature to 77 degrees K indicating a small lattice deformation. A second transition tentatively identified as arising from a charge-compensated site having a zero-field splitting equal to $1.8\text{+or-}0.1 \text{ cm}/\text{sup } -1/$, has also been observed. The spectrum for strontium titanate has been studied at 35GHz and 70GHz and it is found that the Hamiltonian parameters differ slightly from those previously determined from the 10 GHz spectrum. (11 Refs)

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DIALOG(R)File 2:INSPEC

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00063513 INSPEC Abstract Number: A69043103

Title: Characteristic features of the dielectric polarization of ferroelectric solid solutions with the perovskite-type structure at the morphotropic phase boundary and far from it

Author(s): Stolypin, Yu.E.; Isupov, V.A.

Journal: Fizika Tverdogo Tela vol.11, no.3 p.823-5

Publication Date: March 1969 Country of Publication: USSR

CODEN: FTVTAC ISSN: 0367-3294

Translated in: Soviet Physics - Solid State

Country of Publication: USA

CODEN: SPSSA7 ISSN: 0038-5654

Language: Russian Document Type: Journal Paper (JP)

Abstract: The permittivity of solid solutions $(1-x)(0.6\text{PbTiO}_3/0.4\text{PbMgO})_{0.5}\text{W}_{0.5}\text{O}_{0.5} + x\text{PbZrO}_3$ was determined in static electric fields up to 20 kV/cm. It was found that the solutions near a morphotropic (vertical) phase boundary, separating the ferroelectric (tetragonal, $x < 0.30$) and paraelectric (rhombohedral, $x > 0.30$) compositions, exhibited different field dependences of the permittivity from the solutions far from this boundary. This was attributed to the coexistence of mixed tetragonal and rhombohedral phases near the morphotropic boundary and subsequent formation of boundaries between these phases.

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00063406 INSPEC Abstract Number: A69042939

Title: Phase composition of reduced and reoxidized barium titanate

Author(s): Arend, H.; Kihlberg, L.

Author Affiliation: Czechoslovak Academy Sci., Prague, Czechoslovakia

Journal: Journal of the American Ceramic Society vol.52, no.2 p. 63-5

Publication Date: 21 Feb. 1969 Country of Publication: USA

CODEN: JACTAW ISSN: 0002-7820

Language: English Document Type: Journal Paper (JP)

Abstract: Reducing high-purity BaTiO_3 in hydrogen for 1 h at 1275 degrees C leads to an oxygen deficiency $x = 0.0036$ in BaTiO_{3-x} with maintenance of the tetragonal/cubic perovskite-type structure. Reduction at 1325 degrees C leads to $x = 0.0073$ and brings about transformation to the hexagonal modification. Up to 1500 degrees C ($x = 0.0233$) no further phase change occurs. Annealing the oxygen-deficient hexagonal phase in oxygen at 850 degrees C for 2 h produces stoichiometric samples which are still hexagonal, whereas the tetragonal/cubic structure is restored by heating for 1 h at 1350 degrees C. (16 Refs)

4/7/513

DIALOG(R)File 2:INSPEC

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00063265 INSPEC Abstract Number: A69042795

Title: Perovskite type structures of aluminates of rare-earth elements

Author(s): Margolis, N.V.; Udalov, Yu.P.

Journal: Kristallografiya vol.14, no.2 p.334-6

Publication Date: March 1969 Country of Publication: USSR

CODEN: KRISAJ ISSN: 0023-4761

Language: Russian Document Type: Journal Paper (JP)

Abstract: Calculations are made of the maximum relative displacement and of the force acting on the anion in rare-earth aluminates for rhombohedral and tetragonal lattice distortion. The results are plotted against the radius of the lanthanide ion; the curves are discussed, and it is concluded that rare-earth aluminates with the perovskite structure and rhombohedral lattice distortion can exist between ionic radii of 0.942 and 0.91 AA.

4/7/514

DIALOG(R)File 2:INSPEC

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00060163 INSPEC Abstract Number: A69039211

Title: Crystal growth and phase transitions of CsPbCl_3

Author(s): Hirotsu, S.; Sawada, S.

Author Affiliation: Tokyo Inst., Technology, Japan

Journal: Physics Letters A vol.28a, no.11 p.762-3
Publication Date: 10 March 1969 Country of Publication: Netherlands
CODEN: PYLAAG ISSN: 0375-9601
Language: English Document Type: Journal Paper (JP)

Abstract: Three phase transitions were confirmed in the perovskite-type crystal CsPbCl/sub 3/ by observing changes of conosopic figures with temperature. Measurements of the temperature dependence of birefringence and specific heat were also performed.

4/7/515
DIALOG(R)File 2:INSPEC
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00041801 INSPEC Abstract Number: A69028558
Title: Correction of dipole field due to lattice deformation of a Perovskite-type crystal
Author(s): Kinase, W.; Uemura, Y.; Kikuchi, M.
Author Affiliation: Univ., Nishiokubo, Shinjuku, Tokyo, Japan
Journal: Journal of the Physics and Chemistry of Solids vol.30, no.2
p.441-7

Publication Date: Feb. 1969 Country of Publication: UK
CODEN: JPCSAW ISSN: 0022-3697
Language: English Document Type: Journal Paper (JP)
Abstract: Correction of Lorentz field coefficients in a Perovskite- type crystal is discussed by considering orthorhombic deformation of a simple cubic lattice. If one considers the deformation of crystal structure from the simple cubic lattice to the orthorhombic lattice a change of the internal field at some respective points caused by the dipole interaction is calculated. By applying the results, quantitative discussions are possible for many phenomena accompanied by the lattice deformation namely, ferroelectricity, piezoelectricity, photoelasticity and so on. As an example calculations are made to estimate the birefringences of the BaTiO/sub 3/ and WO/sub 3/ crystals.

Perovskite like in books

| | | |
|----|-------|--|
| S1 | 1 | perovskite-like |
| S2 | 134 | perovskite |
| S3 | 57219 | like |
| S4 | 1 | (perovskite-like) or (perovskite w like) |

5=> f s4 and yr < 1986

S E A R C H R E S U L T S

| Search ID | Records Found | Search Term |
|-----------|---------------|------------------|
| S5 | 1 | s4 and yr < 1986 |

6=> d s5 1 f8

Record 1 of 1
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Page: 1 of 1

AN: 9198569

AU: Moller, Christian Knakkegard.
 TI: The structure of perovskite-like caesium plumbo trihalides
 YR: 1959
 PB: Munksgaard,
 PL: Kobenhavn :
 SE: Matematisk-fysiske meddelelser / udgivet af det Kongelige Danske
 videnskabernes selskab ; bd. 32, nr. 2
 LN: English
 PT: Book
 PH: 27 p. : ill. ; 24 cm.

Perovskite type

6=> f (perovskite-type) or (perovskite w type)

S E A R C H R E S U L T S

| Search ID | Records Found | Search Term |
|--------------|------------------|--|
| ----- | ----- | ----- |
| S6 | 25 | perovskite-type |
| S7 | 134 | perovskite |
| S8 | 82277 | type |
| S9 | 30 | (perovskite-type) or (perovskite w type) |

10=> f s9 and yr < 1986

Searching ...

S E A R C H R E S U L T S

| Search ID | Records Found | Search Term |
|--------------|------------------|------------------|
| ----- | ----- | ----- |
| S10 | 13 | s9 and yr < 1986 |

11=> d s10 1-13 f8

R e c o r d 1 o f 13

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AN: 31493896
 AU: Galasso, Francis S.
 TI: Structure, properties, and preparation of perovskite-type compounds
 YR: 1969
 PB: Pergamon Press,
 PL: Oxford ; New York :
 SE: International series of monographs in solid state physics ; v. 5
 LN: English
 PT: Book
 PH: x, 207 p. : ill.

R e c o r d 2 o f 13

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AN: 31119286
 AU: Karian, Harutun G.
 TI: Tight-binding energy bands of perovskite type transition metal oxides
 YR: 1969

LN: English
PT: Book
PH: 264 leaves : ill. ; 29 cm.

Record 3 of 13
Copyright 1998 OCLC

AN: 30202456
AU: Kay, Herbert Frederick.
TI: Growing of perovskite-type crystals.
YR: 1954
PB: British Electrical & Allied Industries Research Association,
SE: British Electrical & Allied Industries Research Association. Technical
reports ; L/T303
LN: English
PT: Book
PH: 11 p. : ill. ; 29 cm.

Record 4 of 13
Copyright 1998 OCLC

AN: 27705140
AU: Jonkers, G. H.
TI: The dielectric properties of titanates of the perovskite type.
YR: ? 1947 1993
SK: 92-18028 NTC
LN: English
PT: Book
PH: 15 p.

Record 5 of 13
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AN: 27440633
AU: Li, W.
TI: Rare earth perovskite-type catalysts and hopcalite.
YR: ? 1985 1993
SK: 92-17440 NTC
LN: English
PT: Book
PH: 15 p.

Record 6 of 13
Copyright 1998 OCLC

AN: 26422718
TI: A Process for production of perovskite type oxide powder containing
zirconium.
YR: ? 1984 1990
SK: 89-15770 NTC
LN: English
PT: Book
PH: 6 p.

Record 7 of 13
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AN: 26419114
TI: A Process for production of perovskite-type lead-containing composite

oxide.
YR: ? 1985 1990
SK: 89-14970 NTC
LN: English
PT: Book
PH: 37 p.

R e c o r d 8 o f 13
Copyright 1998 OCLC

AN: 26413442
AU: Dougier, P.
TI: Study of the magnetic, electrical and optical properties of the
perovskite-type phases of strontium vanadate (SrVO₂.
YR: ? 1975 1992
SK: 92-10366 NTC
LN: English
PT: Book
PH: 16 p.

R e c o r d 9 o f 13
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AN: 14161872
AU: Nelson, Carl W.
TI: Ferroelectricity and the chemical bond in perovskite-type oxides
YR: 1963
PB: Laboratory for Insulation Research, Massachusetts Institute of
Technology,
PL: Cambridge, Mass. :
SE: Technical report / Laboratory for Insulation Research, Massachusetts
Institute of Technology ; 179
LN: English
PT: Book
PH: 31 p. : ill. ; 28 cm.

R e c o r d 10 o f 13
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AN: 10986161
AU: Otagawa, Takaaki, 1953-
TI: Electrocatalysis of oxygen evolution of perovskite-type oxides
YR: 1983
LN: English
PT: Book
PH: xxii, 334 leaves : ill. ; 29 cm.

R e c o r d 11 o f 13
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AN: 6020262
AU: Michel, Christian Gabriel, 1939-
TI: Structures and relationships of some Perovskite-Type compounds.
YR: 1970
LN: English
PT: Book
PH: 89 p.

R e c o r d 12 o f 13

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